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Countering the threat posed by improvised explosive devices

Report of the Secretary-General

Summary

Pursuant to General Assembly resolution 71/72, the present report is submitted to reflect the challenges related to countering the threat posed by improvised explosive devices), taking into account existing efforts and initiatives carried out within and outside the United Nations system.

Since the first report of the Secretary-General on this matter (A/71/187), many stakeholders, including States, international and regional organizations, non-governmental organizations and private industry, have undertaken efforts to combat the cross-cutting and multidimensional challenges posed by the devices, including to develop standards, disseminate guidance, furthering the exchange of information, engage with the private sector and adopt new resolutions in the General Assembly and the Security Council.

The impact of improvised explosive devices on civilians remains a serious concern to the international community, including in the perpetration of terrorist attacks on roads, in commercial premises, markets and places of worship and at public events. The widespread use the devices has been well documented in Afghanistan and Somalia, as well as in Iraq, the Syrian Arab Republic and Yemen, and actors in the Sahel and the Lake Chad Basin are also increasingly using them.

In many conflicts, in particular those involving non-State armed groups, the use of improvised explosive devices has become a common practice. They are frequently fabricated to create improvised mortars, projectiles, grenades and landmines that are used during hostilities in a similar fashion to their conventionally produced equivalents.

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The increased number of crisis and conflict situations around the world has contributed to a dramatic surge in the manufacture and use of improvised explosive devices in recent years. They are no longer a fringe category of explosive device, but rather a staple component of ad hoc arsenals. The increased scale, lethality, sophistication and diversity of the devices is alarming.

The proliferation of mass-produced improvised explosive devices has further complicated the problem. The predominance of such weapons in Iraq, the Lake Chad Basin, the Syrian Arab Republic and Yemen has shown that non-State armed groups have used expertise and production technology to circumvent conventional arms controls, including the ban on anti-personnel landmines and various sanctions regimes.

States have continued to address the threat posed by improvised explosive devices in various multilateral forums, including the Security Council, the General Assembly and relevant treaty bodies, including the Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May Be Deemed to Be Excessively Injurious or to Have Indiscriminate Effects. Discussions across such forums were reflected security, humanitarian, counter-terrorism and mine-action perspectives, illustrating the complexity of developing a comprehensive response to improvised explosive devices.

Building on the first report on this matter and the substantive recommendations contained therein, the present report is aimed at providing a current state of play with regard to the threat posed by improvised explosive devices, highlighting two priority themes for further consideration: leveraging existing mechanisms and initiatives and enhancing international cooperation, assistance and information-sharing. The present report also contains conclusions and recommendations, including a non-exhaustive review of the recommendations made in the first report.

I. Current state of play: developments and trends

Increasingly urban nature of conflict and the impact of improvised explosive devices on civilians

1. The asymmetrical nature of modern conflict has brought the violence and destruction once reserved for remote battlefields to the doorstep of civilian populations. Increasingly, conflicts are waged in the streets and on the homes and infrastructure of urban areas. The use of improvised explosive devices in densely populated areas has been catastrophic — lives have been lost and individuals have been displaced and are increasingly unable to return home. The widespread use of the devices to terrorize populations has exacerbated the devastation that they and other explosive devices wreak long after the battle has moved on to the next city.

2. Increasingly, non-State armed groups are turning to improvised explosive devices as weapons of choice and utilizing them indiscriminately. The devices are laid in homes, preventing families from returning, and on streets and bridges, preventing commerce from resuming. Schools, hospitals, water treatment plants, wells, markets and places of worship alike are littered with them.

3. The humanitarian impact and indiscriminate effects of improvised explosive devices constitute a key consideration in addressing the threat they pose. Their improvisational nature often renders them inaccurate and erratic, thus posing a serious threat to communities as well as to humanitarian workers and to United Nations staff and peacekeepers.

4. Survivors of attacks in which improvised explosive devices have been used are often left with complex, life-changing injuries that also have an impact on their families and communities. Victims will often require emergency and specialized medical treatment, rehabilitation and psychosocial support services that are often unavailable, particularly in situations of armed conflict. The respective needs of women, men, girls and boys must be considered in this context.

5. In the past two years, civilians have continued to bear the brunt of attacks in which improvised explosive devices have been used, with the majority of the attacks occurring in populated areas. According to a recent report, it is estimated that of the 31,904 civilian casualties of explosive devices in 2017, 11,791 resulted from improvised explosive devices.[1] Afghanistan, Iraq, Pakistan, Somalia and the Syrian Arab Republic each sustained more than 1,000 casualties as a result of attacks using improvised explosive devices. Afghanistan was the country most affected by such attacks in 2017, which resulted in 4,151 civilian casualties (1,229 dead and 2,922 injured) comprising 40 per cent of total civilian casualties for that year.[2] A single attack in Kabul in May 2017 resulted in more than 542 people killed or injured. The worst reported incident in 2017 involving improvised explosive devices occurred in Mogadishu in October, with the detonation of a truck bomb that resulted in more than 800 deaths and injuries.

6. Recent research shows that nearly 50 countries experienced at least one casualty related to the use of improvised explosive devices in 2017,[1] demonstrating that the threat is not confined to a region or contextual setting, but has become a global problem that spans settings of conflict, crime and terrorism.

[1] Action on Armed Violence, "The burden of harm: monitoring explosive violence in 2017" (2018).

[2] United Nations Assistance Mission in Afghanistan, *Afghanistan: Protection of Civilians in Armed Conflict — Annual Report 2017* (2018).

7. The use of improvised explosive devices by terrorist groups across the Levant and North Africa remained acutely alarming (see S/2018/14/Rev.1). In addition, abandoned devices in so-called recaptured areas posed a challenge to clearance and stabilization efforts. Thus, these devices often have effects beyond the immediate harm caused by their detonation. Reports of tens of thousands of devices left behind in the city of Raqqa by Islamic State in Iraq and the Levant (ISIL, also known as Da'esh) illustrated the scope of the clearance problem and the urgent need for a risk education campaign in such areas.[3]

8. The recruitment and use by non-State armed groups of children to act as carriers of person-borne improvised explosive devices, including to lay the devices, has become an issue of increasing concern over the reporting period covering the past two years. The particular impact of the devices on children in Iraq, Libya, Mali, Somalia, the Syrian Arab Republic and Thailand was already noted in the 2017 report of the Secretary-General on children and armed conflict (A/72/361-S/2017/821). In general, improvised explosive devices exacerbate grave violations committed against children in the course of armed conflict, in particular since they put children at risk of being killed, maimed, denied access to humanitarian aid, recruited or used, including in the context of attacks on schools and hospitals.

9. The monitoring and reporting mechanism on grave violations against children in situations of armed conflict documented 566 children killed by person-borne improvised explosive devices in the north-eastern part of Nigeria in 2017. In that year alone, the number of children used in such attacks in Nigeria was three times greater than the number in 2014, 2015 and 2016 combined.[4]

10. Such statistics paint a grim picture of the impact of improvised explosive devices on civilians. Attacks involving the devices in the past two years overwhelmingly targeted civilians and civilian objects, in violation of international humanitarian law. Such attacks on public roads, commercial premises and markets caused the highest number of civilian casualties in 2017, followed by attacks in places of worship and urban and residential areas.[1]

Impact on humanitarian assistance and sustainable development

11. The use of improvised explosive devices continued to have a deleterious impact on the provision of humanitarian assistance, in particular to the most vulnerable populations. Humanitarian actors, including those performing mine clearance activities, were increasingly required to work in hostile environments wherein improvised explosive devices had become a regular challenge with which they had to cope.

12. The humanitarian disposal of improvised explosive devices remained an important consideration and a means to mitigate the harm that the devices can cause. Another humanitarian consideration concerned the disposal of devices left undetonated after active hostilities have ceased. Rendering critical infrastructure safe and releasing land contaminated by the devices represented major impediments to sustainable development and a tremendous drain on a State's financial resources as well as those of international organizations. For example, the Mine Action Service of the United Nations indicated that its financial needs for clearance and stabilization

[3] See http://www.unhcr.org/sy/11607-first-un-humanitarian-mission-raqqa-city-post-isis.html.

[4] Monitoring response mechanism and *2018 Humanitarian Response Plan: January-December 2018 — Nigeria*, available from www.reliefweb.int/sites/reliefweb.int/files/resources/2018_hrp_v5.4.pdf.

operations in Iraq exceeded $216 million and that clearance efforts could take decades.[5]

13. The disruption caused in communities as a result of improvised explosive device attacks has a definite impact on the potential to achieve the Sustainable Development Goals, including with regard to sustainable cities and communities (Goal 11), life below water and on land (Goals 14 and 15), and peace, justice and strong institutions (Goal 16). Attacks can result in death, injury, economic loss, displacement and the destruction of infrastructure and private property. Contamination from the devices has disastrous environmental consequences, including on water and sanitation.

New developments in the design and detonation of improvised explosive devices

14. Owing to their improvised nature, improvised explosive devices remain in constant flux with regard to methods of manufacture and modes of detonation.

15. The growing sophistication of their design is undeniable and includes an increasing number and type of switches and an association with other linked and connected devices. There have been significant developments in their design, primarily with regard to the configuration of main charges and the use of multiple switches, that have enabled non-State armed groups to construct devices that are easier to conceal and harder to detect and render safe. Often, improvised explosive devices have been designed and laid specifically to endanger both returning civilian populations and operators tasked with clearance of the devices.

16. Non-State armed groups have significantly stepped up production of improvised weapons as a result of considerable innovation, engineering capacity and production management, combined with extensive acquisition networks through which device components and chemical precursors can be procured. Attacks using vehicles operated by suicide bombers have increasingly become a deployment method of choice for such groups. Examples of newly developed improvised weapons include shoulder-fired recoilless rocket launchers, improvised claymores[6] and multiple switches to arm and fire improvised explosive devices. They are used in a variety of ways, including as anti-personnel devices and anti-tank/vehicle devices. Improvised explosive devices that are air dropped from unmanned aerial vehicles are also an alarming development.

17. The use of projected grenades as airborne improvised explosive devices by ISIL has been documented.[7] In addition, there has been a trend in the design of projected devices more generally, such as improvised mortars and rockets, to maximize the range and effect of the device. Other developments in design include those related to device concealment.

18. ISIL in particular has used improvised explosive devices since its inception, but its ability to develop capacities to assemble and detonate them on an industrial scale and to use commercially available means for their delivery, such as drones, has become especially distressing (see S/2017/467).

New initiatives in the Security Council

19. The adoption of resolutions 2365 (2017) and 2370 (2017) over the course of 2017 explicitly demonstrated the rising concern in the Security Council over the threat that improvised explosive devices pose to international peace and security. The frequency of references in the Security Council to the devices is also indicative of

[5] See http://www.mineaction.org/programmes/iraq; and http://www.mineaction.org/sites/default/files/documents/Iraq_Newsletter_May_2018.pdf.

[6] Known as a directionally focused fragmentation charge or horizontal effect.

[7] Conflict Armament Research, "Islamic State's multi-role IEDs", April 2017.

their increased use as a means to threaten and inflict harm, principally on civilians, but also on humanitarian and peacekeeping staff.

20. The Security Council adopted resolution 2365 (2017) as its first stand-alone resolution on mine action and explosive hazard threat mitigation. The Council noted with grave concern that the indiscriminate use of the improvised explosive devices, including by terrorists remained a major threat to the civilian population, including refugees returning to their homes and the safety of peacekeeping personnel. The Council requested the Secretary-General to provide the Council information on threats posed by landmines, explosive remnants of war and improvised explosive devices, and on measures to mitigate the threats, when reporting on peacekeeping operations, special political missions and humanitarian responses.

21. In its resolution 2370 (2017), the Council called upon Member States to enhance institutional capabilities and resources for preventing and countering the threat posed by improvised explosive devices. It encouraged Member States to share information, establish partnerships and develop national strategies and capabilities to counter the devices. It also encouraged Member States to prevent and disrupt procurement networks for such weapons, systems and components between ISIL, Al-Qaida and associated individuals, groups, undertakings and entities.

22. The role of improvised explosive devices in the perpetration of terrorist attacks remained a central point of concern for States in other resolutions and debates. The Security Council remained seized of that dimension of the threat posed by the devices, principally in the context of the situation in Afghanistan and the threats by the Taliban, Haqqani Network, ISIL, Al-Qaida and affiliates (see resolutions 2344 (2017) and 2368 (2017)). Previously, the Council had raised the issue of improvised explosive devices in discussions related to foreign terrorist fighters (see resolution 2178 (2014)).

General Assembly consultations

23. Pursuant to General Assembly resolution 71/72, an informal consultative process, including ongoing multilateral and integrative discussions, has been established on the issue of improvised explosive devices. The informal process allows for sufficiently flexible discussions on an ongoing basis.

24. In its resolution 71/72, the General Assembly underlined that, for the issue of improvised explosive devices to be effectively addressed, it was essential to comprehend the importance of action at the local and community levels through activities ranging from awareness-raising to deradicalization programmes. It also encouraged Member States to enhance, as appropriate, international and regional cooperation, including the sharing of information on good practices as appropriate and where relevant, in cooperation with the International Criminal Police Organization (INTERPOL) and the World Customs Organization.

25. The General Assembly encouraged Member States to hold open, informal consultations, where appropriate, on matters of coordination, between the various existing initiatives and approaches relating to improvised explosive devices, and on efforts to prevent, counter and mitigate the threat posed by the devices. The first informal consultation was convened in 2017, providing States with the opportunity to discuss the range of challenges posed by the devices and utilize the expertise of international, regional and non-governmental organizations. The consultations also served as a useful forum for identifying good practices.

26. Consultations held in 2018 focused on engagement with the private sector, with a view to stemming the flow of dangerous precursor materials; and on the importance of standards, guidelines and good practices in preventing and mitigating improvised

explosive devices. States, international organizations and non-governmental organizations participated in an active exchange, contributing to the growing body of information and common understanding related to the threat posed by the devices.

II. Leveraging existing mechanisms and initiatives

Review of Member State efforts

27. The Counter-Terrorism Committee and the Counter-Terrorism Committee Executive Directorate continued, within their respective mandates, to review Member State efforts to eliminate the supply of weapons to terrorists in the context of implementing Security Council resolution 1373 (2001), with a view to identifying good practices, gaps and vulnerabilities. During its relevant assessments in Iraq, the Executive Directorate identified a need for assistance aimed at enhancing the capacity of national authorities to combat ISIL, including training in countering the use of improvised explosive devices, home-made explosives and car bombs. Similar efforts have been undertaken in cooperation with national authorities in Afghanistan, the Lake Chad Basin and the Sahel.

Development of guidance and standards

28. The United Nations continued to play a role in developing globally relevant, standardized guidance for the benefit of interested States. As the threat posed by improvised explosive devices evolves, the pool of guidance and standards must progress apace.

Standards for the disposal of improvised explosive devices

29. Complex improvised explosive devices pose a unique challenge with regard to clearance. In response to calls from Member States, the United Nations initiated the development of standards for the safe, effective and efficient disposal of the devices in order to ensure the safety of those tasked with their clearance, as well as to promote a level of quality assurance in that task. Coordinated by the Mine Action Service, and in close cooperation with the Office of Military Affairs of the Department of Peacekeeping Operations and with Member States, the standards for the disposal of improvised explosive devices went into effect in 2018. The development of the standards benefitted from views presented by a broad range of States, non-governmental organizations and United Nations representatives.

30. The standards are of a technical nature and are intended for use by operators tasked with the disposal of the devices and the organizations and units that employ the operators under the auspices of the United Nations. The standards provide guidance on how to undertake threat and risk analysis with regard to the devices; the competencies and associated training and equipment required to conduct disposal operations; approaches to clearance of the devices in rural and urban areas; managing information on the devices; and risk education on the devices.

31. The standards fill a gap in the technical guidance required to respond to the expanding and increasingly complex problem of improvised explosive devices. The United Nations has a duty of care to ensure that those tasked with disposing of the devices are guided by a competent and practical standard.

Guidelines on Improvised Explosive Device Threat Mitigation in Mission Settings

32. The Mine Action Service has been monitoring the implementation by peace operations of the Guidelines on Improvised Explosive Device Threat Mitigation in Mission Settings, which were prepared by the Department of Peacekeeping Operations and the Department of Field Support. The Guidelines serve to codify the best practices of the Mine Action Service, identify relevant stakeholders for improved decision-making and highlight the importance of risk awareness material.

33. In Mali, the Guidelines helped the country to develop a threat mitigation governance framework and standard operating procedures. The development and implementation of such a self-sustaining approach for threat mitigation has been an innovative achievement for the Mine Action Service and the Department of Peacekeeping Operations.

34. The Department of Peacekeeping Operations Office of Military Affairs developed a handbook on mitigating threats from improvised explosive devices and an Explosive Ordnance Disposal Military Unit Manual to be used by uniformed personnel deployed to mission settings. Together with the standards for the disposal of improvised explosive devices, these two handbooks form an integral pillar of guidance to promote the safety and security of United Nations peacekeepers as well as the effective discharge of their mandates.

International Ammunition Technical Guidelines

35. With regard to stockpile management and the dangers of the diversion of explosive material for the manufacture of IEDs, existing international standards should be maximally utilized. Inadequately managed stockpiles represent a prime target for those seeking the explosive materials required for IED fabrication. The International Ammunition Technical Guidelines are a critical tool in combatting the diversion of explosive items such as military demolition materials and large-calibre ammunition including artillery shells and mortar bombs.

36. The United Nations, through the SaferGuard Programme, continues to support national authorities in the safe and secure management of ammunition in accordance with the International Ammunition Technical Guidelines with a view to preventing diversion and the manufacture of improvised explosive devices.

Focus on precursor materials and engagement with the private sector

37. The wide spectrum of materials that can be used to manufacture improvised explosive devices includes those that can be sourced from military and civilian industry, including all types of explosives — military, civilian, such as those used in mining, and improvised — as well as detonators, detonating cords, poisons and dual-use chemical precursors such as ammonium nitrate, nitric acid and potassium chlorate. As States continue to pursue solutions to the growing threat posed by the devices, it is imperative that there be an examination of the role, responsibility and potential contributions of the private sector in stemming the flow of the devices and related materials. Such an examination becomes especially important in view of complex supply chains involving distributor, wholesaler and retailer levels, the specifics of which will vary by region. Prevention efforts all along the supply chain are critical to the extent that diversion remains a threat at all stages.

38. Industry itself has pursued a number of initiatives aimed at increased oversight and accountability along the supply chain with regard to precursor components. Such programmes include chain-of-custody verification and product stewardship

programmes.[8] For example, security considerations were notably included in the assessment methodology of the International Council of Chemical Associations Responsible Care Programme. The European Responsible Care Security Code, the United Kingdom Chemical Business Association security code and the Fertilizers Europe Product Stewardship Programme also constitute useful examples of private industry taking into consideration the dangers posed by the acquisition of materials for manufacture of the devices.

39. Other notable examples of good practices by private industry include the establishment of focal points and the production and distribution of informative materials. Constructive efforts have also been focused on raising awareness on the threat down the supply chain as well as through strengthening physical security and record-keeping. The role of local industry must also be underscored.

World Customs Organization

40. Preventing incidents involving improvised explosive devices requires the participation of a variety of stakeholders at different levels. In respect of preventing the international movements of precursor chemicals and other components used to manufacture the devices, customs administrations play a central role. They have the capacity to interdict illicit shipments or refer cases deemed suspicious to counterpart agencies. In addition, customs authorities have a wealth of information at their disposal due to the data collected in customs clearance systems that could be used to identify security-related risks.

41. The work of the World Customs Organization in this area is noteworthy. The longest-running security-related programme of the World Customs Organization, Programme Global Shield represents a coherent attempt to monitor certain highly explosive chemical precursors that could be used in the fabrication of the devices. The programme has promoted effective coordination between the organization, INTERPOL and the United Nations Office on Drugs and Crime. Since its inception, its law enforcement operations have resulted in the seizure of precursor materials, detonators and transmitting devices. With regard to capacity-building, more than 400 officials have been trained in the detection of suspicious movements of chemicals, detonators and transmitters. The programme recently reviewed its list of monitored commodities and will undertake further activities in the South-East Asian region and the West, Central and East African regions.

42. In addition, the World Customs Organization has adopted the Framework of Standards to Secure and Facilitate Global Trade. The Framework consists of the following elements: harmonizing the advance electronic cargo information requirements on inbound, outbound and transit shipments, committing to a consistent risk-management approach to address security threats, including outbound inspection of high-risk cargo preferably using non-intrusive inspection equipment, and supporting partnerships with businesses that meet minimal supply chain security standards and best practices. Letters of intent to implement the Framework have been submitted by 169 members of the World Customs Organization that are at different stages of implementation.

[8] See UNIDIR report on the informal private sector consultative meeting held in Geneva on 6 and 7 March 2017 entitled "Examining the roles, responsibilities and potential contributions of private sector industry actors in stemming the flow of improvised explosive devices and related materials", available from www.unidir.org/files/publications/pdfs/ied-geneva-meeting-march-2017-en-683.pdf.

INTERPOL

43. The Chemical Risk Identification and Mitigation Programme (CRIMP) remains a flagship INTERPOL programme with regard to addressing precursor materials. It is designed to increase the capacity of agencies involved in counter-terrorism activities and infrastructure protection to identify chemicals at particular risk of diversion and misuse by criminals and terrorist groups. Understanding the threat allows for the creation of sustainable and focused chemical countermeasures, led by law enforcement agencies and supported by partners in industry and academia.

44. Through the Chemical Risk Identification and Mitigation Programme, INTERPOL has identified a prioritized list of the most significant chemicals of concern with a view to supporting States in developing chemical countermeasures programmes. The Programme is building a sustainable cadre of national officials proficient in risk assessment, chemical-threat prioritization and targeted chemical countermeasures.

United Nations Institute for Disarmament Research

45. The United Nations Institute for Disarmament Research (UNIDIR) organized and held an informal consultative meeting with representatives from the private sector to ascertain their perspective on the roles, responsibilities and potential contributions of private sector actors in stemming the flow of improvised explosive devices and related materials. Private sector experts shared their views on regulatory frameworks, physical security considerations, information-sharing processes, awareness-raising activities and good practices.[9]

Deepening research and expanding data collection

46. Incident reporting in relation to improvised explosive devices merits additional resources and attention, given that the pool of professional research and analysis of device use and impact is insufficient to enable the international community to formulate an effective, evidence-based response.

47. Accurate data and corresponding analysis is at the heart of effective policymaking and is particularly crucial in the context of conflict situations and humanitarian emergencies. As the likelihood of reporting in conflict and post-conflict environments is often diminished, efforts to deepen and expand data collection in these contexts are imperative.

48. More concrete information on types of improvised explosive devices, including means of detonation and their effects, is a necessity in order to best inform the response by the international community to the evolving threat posed by them. More information on how users of the devices access materials required for their manufacture is needed, as is information on the full short- and long-term impact of attacks involving the devices on communities. The latter is especially wanting in view of the psychological, sociological and developmental consequences that extend well beyond the moment of the device's detonation.

49. While the challenges of reporting on incidents involving improvised explosive devices are clear, owing to the improvised nature of the devices and the fact that the attacks often take place in remote areas with little media coverage, it is essential that more data, including the specific physical impact of the different types of devices, be collected to understand the harm they cause.

[9] Ibid.

50. Other areas that stand to benefit from additional research include behavioural factors driving the use of improvised explosive devices and regional specificities in their production and use, as well as interventions and successes in threat reduction.

United Nations Assistance Mission in Afghanistan

51. In respect of data collection, the United Nations Assistance Mission in Afghanistan (UNAMA) has been reporting on civilian casualties since 2007. UNAMA investigates reports of civilian casualties by conducting on-site investigations, where possible, and by consulting a range of sources and types of information evaluated for credibility and reliability.

52. In 2017, UNAMA documented 10,453 civilian casualties, 40 per cent of which were caused by suicide attacks and improvised explosive devices.[10] From 1 January to 31 March 2018, UNAMA documented 2,258 civilian casualties (763 dead and 1,495 injured), reflecting similar levels of civilian harm documented in the first three months of 2017 and 2016. Suicide bombings using the devices and complex attacks were the leading cause of civilian casualties, a new trend observed by UNAMA in 2018.[11]

INTERPOL

53. Since 2014, INTERPOL has managed the Project Watchmaker initiative, which supports military and police forces in their efforts to counter the threat posed by improvised explosive devices. Efforts include gathering, analysing and sharing intelligence on the devices. The data exchange is aimed at identifying, locating and arresting suspected bomb makers. Thus, a critical component of initiative is the generation of data on individuals involved in the acquisition, manufacture or use of the devices.

54. The Project Watchmaker database currently includes over 3,100 names of known and suspected bomb makers as well as over 100 methodologies that bomb makers are using to construct and use the devices. Project Watchmaker developed a region-focused model and established regional working groups in South-East Asia, the Middle East and North Africa. While each region is distinct with regard to the relative weight of specific groups and modus operandi, there are promising signs of information exchange between them.

III. Enhancing international cooperation, assistance and information-sharing

Enhancing United Nations coordination

55. The complexity of the improvised explosive device issue rests, in part, on the number of actors operating in contexts where the devices are typically deployed. Stakeholders include humanitarian and mine action actors, State and military forces and specialized private sector entities. Each actor takes specific approaches to respond to the threat posed by the devices depending on its mandates, roles and resources. Local-level actors, including law enforcement and commercial entities, often play a significant role.

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[10] United Nations Assistance Mission in Afghanistan, *Afghanistan: Protection of Civilians* (see footnote 2 above).

[11] United Nations Assistance Mission in Afghanistan, *2018 Quarterly Report on the Protection of Civilians in Armed Conflict: 1 January–31 March 2018*.

56. The broad range of United Nations entities engaged in work related to improvised explosive devices should be seen as an asset in leading to a strong, collective response by the Organization to the threat, which has become one of the most pressing issues both inside and outside of armed conflicts.

57. In that regard, taking into consideration the recommendations contained in the report entitled *Performance Peacekeeping: the Final Report of the Expert Panel on Technology and Innovation in United Nations Peacekeeping*,[12] the Mine Action Service carried out a mapping exercise to identify and analyse responses across the Organization to threats posed by improvised explosive devices. The mapping confirmed that attacks and incidents involving the devices adversely affected the delivery of programmes and mandates, especially in the context of protecting civilians and providing humanitarian assistance. The exercise also found that United Nations efforts to deal with the devices remained somewhat disparate, in terms of both addressing the immediate threat and developing a coherent, operational, policy-related and doctrinal framework on them. Additional challenges that were identified included how best to increase the sharing of expertise and guidance; undertake more cross-cutting, joint projects, including on a regional basis; benefit from existing threat mitigation approaches; and generate greater cooperation among partners.

58. Building on the results of the mapping exercise, as well as the call to action contained in the Secretary-General's new disarmament agenda, entitled "Securing our common future: an agenda for disarmament", the United Nations, under the leadership of the Mine Action Service and in coordination with other relevant entities, will deepen its engagement with regard to improvised explosive devices and ensure a whole-of-system approach.

Strengthening the provision of assistance and capacity-building

59. Building the capacity of States to prevent and respond to incidents involving improvised explosive devices remains paramount. Addressing the threat in an effective, comprehensive and sustainable manner requires efforts by the whole international community, including affected and non-affected States, civil society, the United Nations and other specialized organizations. Many of the efforts to support State capacity-building have already been well documented, including in the previous report of the Secretary-General on the topic (A/71/187).

60. The United Nations has highlighted the need to further develop an understanding of the evolving technical composition and structure of improvised explosive devices deployed in the field. Knowing how the devices work and understanding their component parts are the first steps towards building the necessary capacity that can provide the United Nations with comparative advantages in protecting forces operating in asymmetric environments. This would also enable the United Nations to support affected States in developing national capacities.

Mine Action Service

61. The Mine Action Service actively worked with Member States and troop-contributing countries to provide capacity-building training to address the threat posed by improvised explosive devices to those deployed to peacekeeping missions. In the case of Mali, the combination of training and mentoring for troop-contributing countries by the Mine Action Service and several other threat mitigation measures contributed to an overall reduction in casualties among peacekeepers of 50 per cent from 2016 to 2017, despite an increase in the overall number of incidents targeting

[12] See https://peacekeeping.un.org/sites/default/files/performance-peacekeeping_expert-panel-on-technology-and-innovation_report_2015.pdf.

the United Nations Multidimensional Integrated Stabilization Mission in Mali (MINUSMA). The measures have enhanced the safety, resilience and freedom of movement of MINUSMA.

62. The Mine Action Service helped national authorities to develop the required technical capacity to safely manage improvised explosive devices, coordinate the response and comply with international standards through the provision of training and technical equipment, as well as mentoring and advisory support. Support for capacity-building was also extended to weapons and ammunition management in order to help in preventing illegal access to explosive precursor material.

INTERPOL

63. INTERPOL continued to work through its Chemical Anti-Smuggling Enforcement (CHASE) programme to build the capacity of police, customs, immigration and government chemical and border security agencies to work both within and across borders to target the illegal movement of chemical warfare agents, toxic industrial chemicals and explosive precursor materials.

64. Efforts through the INTERPOL Chemical Awareness and Scene Management Project (CHASM) continued to support crime scene examiners from law enforcement agencies in dealing with chemical and/or explosive contaminated incident scenes. The programme strengthened the ability of law enforcement agencies to investigate chemical attacks, manage chemical crime scenes and forensic protocols and foster cooperation among themselves.

65. Six project courses were held in 2016 and 2017 for Cameroon, Indonesia, Malaysia, Mali, Nigeria and the Philippines. Owing to the success of the courses, a train-the-trainer course has been developed and earmarked for 2018.

Counter-Terrorism Committee Executive Directorate

66. During on-site visits by the Counter-Terrorism Committee, the Counter-Terrorism Committee Executive Directorate engaged with Afghanistan and Iraq in line with the request contained in Security Council resolution 2370 (2017). The Committee, with the support of the Counter-Terrorism Committee Executive Directorate, continued to facilitate technical assistance and capacity-building and raise awareness on eliminating the supply of weapons, including the devices, to terrorists, in particular by strengthening its dialogue with States and relevant international, regional and subregional organizations and by working closely, including through sharing information, with relevant bilateral and multilateral technical assistance providers.

United Nations Office on Drugs and Crime

67. Strengthening the national capacity of Iraq to address improvised explosive devices has been one of the main pillars of the work of the Terrorism Prevention Branch of the United Nations Office on Drugs and Crime (UNODC) since 2015. In 2017 and 2018 the Branch continued to provide capacity-building support to Iraqi criminal justice and law enforcement officers, resulting in the drafting of a national strategy to monitor and control the movement and use of certain chemical materials that are frequently used in the devices.

Office of Counter-Terrorism

68. In partnership with the United Nations Regional Centre for Peace and Disarmament in Africa and the Government of Cameroon, the United Nations Counter-Terrorism Centre, which was placed within the Office of Counter-Terrorism, conducted a project on capacity-building for States in Africa to prevent the acquisition of arms and ammunition by non-State actors. The project helped to implement Security Council resolution 2178 (2014) by strengthening the capacities of African States to prevent the acquisition of arms and ammunition by non-State actors, such as terrorist and other armed groups.

69. Within the framework of the initiative of the United Nations Counter-Terrorism Centre on Integrated Assistance for Countering Terrorism in Mali, the Centre, together with MINUSMA and the United Nations Police, held a series of workshops to strengthen the ability of law enforcement officials to develop strategies to prevent suicide attacks and understand the process of radicalization that leads to terrorism.

Deepening the exchange of information

70. Information-sharing among Member States, international and regional organizations and the private sector is central to addressing the issue of improvised explosive devices. The coordination of information-sharing in this area is challenging owing to the complexity of the issue and the number of stakeholders involved. Considerable efforts have already been made, both inside and outside the United Nations, to better coordinate information-sharing, including the exchange of good practices.

71. Existing mechanisms and platforms for information-sharing are highlighted in table 1.

Table 1
Mechanisms and platforms for information-sharing

Mechanism/platform	*Description*
Project Watchmaker	The INTERPOL Project Watchmaker platform facilitates the flow of data from military forces deployed to relevant hotspots through police channels. Project Watchmaker supports information-sharing by channelling military intelligence through international policing mechanisms in order to support law enforcement authorities on the front lines.
United Nations Office for Disarmament Affairs information hub on improvised explosive devices (https://www.un.org/disarmament/convarms/ieds/)	Established pursuant to General Assembly resolution 71/72, this online information portal provides Member States with information on existing initiatives, policies and tools, including work conducted by the United Nations system and other international organizations such as INTERPOL and the World Customs Organization. States and relevant entities are invited to submit information for inclusion on the online portal.
Compilation of existing guidelines, best practices and other recommendations in the framework of the Convention on Prohibitions or Restrictions on the Use of	The fourteenth conference of High Contracting Parties requested that the Implementation Support Unit of the Convention on Certain Conventional Weapons, in consultation with the Co-Coordinators

Mechanism/platform	*Description*
Certain Conventional Weapons Which May Be Deemed to Be Excessively Injurious or to Have Indiscriminate Effects	on improvised explosive devices and the High Contracting Parties, maintain the compilation on an ongoing basis, including to update it as new relevant guidelines, best practices, recommendations and other comments are issued. The High Contracting Parties to the Convention are invited to update the compilation at any time.
Improvised Explosive Device Lexicon	The document is intended for individuals working in environments contaminated with improvised explosive devices. It provides an agreed common language, which is a prerequisite for data aggregation and analysis, including data transfer between the improvised explosive device databases used by States, non-governmental organizations and private companies. The purpose of the lexicon is to address the issue of differing definitions of improvised explosive devices and the lack of disaggregation of data (by incident type or weapon type, or detailed data on victims and impacts), as well as to guarantee the consistency of the terms used by various organizations in relation to incidents involving the devices.

IV. Follow-up on past recommendations

72. In the previous report (A/71/187), 32 recommendations were made covering prevention, preparedness and response. The recommendations remain valid and should be considered further by States, relevant international and regional organizations, non-governmental entities and the private sector.

73. Examples of some of constructive action taken by relevant entities on the recommendations contained in the previous report are summarized in table 2.

Table 2
Examples of action on recommendations

Recommendation	*Implementing entity*	*Activity*
(1) Rigorous government scrutiny of commercial sectors, from which improvised explosive device components are sourced, is essential, including at the local level. In particular, a regulatory framework for precursor materials, such as fertilizers and detonators for the mining and construction industry, should be in place. Purchase information on large or suspicious transactions of precursor materials should be recorded nationally, and shared internationally, where relevant. Industry and retail organizations and communications companies should be encouraged to develop national and international codes of conduct to assist such a regulatory framework.	INTERPOL, World Customs Organization, participating States	In 2017 the World Customs Organization, together with INTERPOL, conducted the initiative Programme Global Shield in North Africa and the Near and Middle East regions to target commodities used by terrorists and violent extremist organizations to manufacture improvised explosive device. During the operational phase, customs activities focused on the movement of chemicals and other components of the devices into the targeted region. When national customs agencies identified suspicious movements or seized material, the World Customs Organization was notified and a warning message was sent to INTERPOL to advise police authorities. In such cases, INTERPOL informed the relevant national central bureaus in order to stimulate a multi-agency approach. The organization encouraged the national police forces to actively support their customs counterparts in investigating the circumstances surrounding the warning message.
(2) Programme Global Shield and the INTERPOL CHASE and CRIMP programmes provide an excellent infrastructure for functioning international cooperation on controlling explosive precursors. The programmes would benefit from high-level participation by States, and from further financial and technical support from States in a position to provide such support.	INTERPOL, World Customs Organization, participating States	INTERPOL has conducted specialized working group meetings, training sessions and operations in the framework of the CHASE and CRIMP programmes since the previous report of the Secretary-General on this topic. The targeted regions have included South-East Asia, South Asia and the Middle East.
(11) Drawing from existing International Mine Action Standards, the United Nations shall develop international improvised explosive device defeat standards through consultation with Member States.	Mine Action Service	The Mine Action Service coordinated the development of the disposal standards for improvised explosive devices, which came into effect in June 2018 for United Nations personnel and those carrying out activities on behalf of the Organization.

Recommendation	*Implementing entity*	*Activity*
(14) States are encouraged to support the United Nations Institute for Disarmament Research in developing a voluntary self-assessment tool which can assist States in self-identifying gaps and challenges in national improvised explosive device regulation and preparedness.	UNIDIR	UNIDIR launched a project to develop a voluntary self-assessment tool that can assist States in self-identifying gaps and challenges in national improvised explosive device regulations and preparedness. It represented the first phase of an initiative to build national capacities to self-assess regulatory frameworks that address the threat of IEDs. States were encouraged to support UNIDIR in implementing the project.
(15) In their annual discussion within the General Assembly of the resolution on improvised explosive devices, States could, in particular, focus on matters of coordination between the various initiatives and approaches already existing, within the United Nations and beyond. If needed, such discussions could be prepared through open, informal meetings in preparation for the drafting and submission of the Assembly resolution. This would be an inclusive and highly cost-effective process.	All States	At the initiative of Afghanistan, the lead sponsor of the relevant resolution in the General Assembly, States convened for informal consultations on various aspects of the threat posed by improvised explosive devices. Through these inclusive discussions, which have also leveraged expertise from non-governmental and international organizations, States addressed various strands of the challenge posed by the devices, including international cooperation and assistance, engagement with the private sector and the role of standards, guidelines and good practices.
(18) To maximize synergies, the United Nations Office for Disarmament Affairs, supported by other relevant United Nations entities, should establish an online hub providing impartial, authoritative guidance on information relevant to addressing the issue of improvised explosive devices in a comprehensive manner. The hub would include the four main topics of the present section thus facilitating navigation, without duplication, towards existing tools presenting good practices, inside and outside the United Nations system, and filling gaps, where needed.	United Nations Office for Disarmament Affairs	The online information portal provides Member States with information on existing initiatives, policies and tools, including work conducted by other entities of the United Nations system. It was established and launched in March 2017 and is regularly updated with additional resources and relevant information.

Recommendation	*Implementing entity*	*Activity*
(19) Several countries maintain a publicly available national database on detonator manufacturers. Combining this national information in one global repository would strengthen possibilities for investigative and prosecutorial action. Such a database could include the name and contact information of manufacturers, and the characteristics of their serial numbers and other distinguishing marks. As this would be a tool for operational use mainly by law enforcement, it would be best established in INTERPOL.	INTERPOL, participating States	In 2017 INTERPOL created the Watchmaker Crime Analysis File, which makes it possible to process the growing body of information provided by participating member countries. It also allows INTERPOL to produce analytical reports that are more specialized and to better exploit existing data and links. Information on detonator manufacturers can be channelled to the Watchmaker Crime Analysis File and used as a global repository that would strengthen possibilities for investigation and prosecution.
(23) For secure operational information-sharing, States may use the INTERPOL I-24/7 network and the Customs Enforcement Network Communication Platform (CENcomm) of the World Customs Organization, wherever possible.	INTERPOL, participating States	The INTERPOL initiative Project Watchmaker provided operational and specialized support to all of its 192 member countries through the issuance and dissemination of INTERPOL notices on improvised explosive devices and bomb makers. The Watchmaker database currently contains over 3,100 bomb maker profiles (compared with over 1,000 in 2016) from 61 countries (compared with 25 in 2016).
(26) The sharing of purchase information on large or suspicious transactions of precursor materials may be best channelled through INTERPOL and the World Customs Organization.	INTERPOL, participating States	Within the framework of the World Customs Organization initiative Programme Global Shield and through direct communication with member countries, INTERPOL shared purchase information on large or suspicious transactions of precursor materials.
(28) Member States should provide necessary support to relevant international and regional organizations and expert non-governmental organizations in the undertaking of rapid and effective clearance of improvised explosive devices and other explosive hazards.	INTERPOL, participating States	Since forensic capabilities to investigate IED attacks are essential for efforts to combat threats from such devices, INTERPOL, with substantial support from host countries in Africa, conducted a number of CHASM courses for crime scene examiners from law enforcement agencies on dealing with chemical and/or explosive contaminated incident scenes.

Recommendation	*Implementing entity*	*Activity*
		INTERPOL developed a specialized chemical investigation, examination and forensics course, which was designed to provide information on bomb scene examination and management, contaminated crime scene awareness, the role of explosives officers and explosive ordnance disposal specialists, exhibit management, forensic recovery and safety at scenes.

V. Recommendations

74. While progress has been made, more needs to be done. In addition to the broad areas of work outlined above, the following actions are recommended:

Action 1: Enhance discussions on improvised explosive devices in relevant forums

- **The issue of improvised explosive devices should be addressed from multiple complementary angles, including counter-terrorism, explosive threat mitigation, mine action, the protection of civilians and export controls.**
- **States are encouraged to engage actively in the informal consultations held pursuant to General Assembly resolution 71/72, on countering the threat posed by improvised explosive devices, in which the Assembly provided an essential framework for all stakeholders to exchange views and coordinate approaches on the range of aspects relating to the threat posed by the devices.**
- **States that have not yet become parties to the Protocol on Prohibitions or Restrictions on the Use of Mines, Booby-traps and Other Devices as Amended on 3 May 1996 (Protocol II as amended on 3 May 1996) are encouraged to do so. They are also encouraged to participate in the discussions on improvised explosive devices within this framework, including by contributing to the compilation of existing guidelines and best practices disseminated through the Group of Experts.**
- **States should consider supporting the regional working groups of the INTERPOL Project Watchmaker that have been developed in line with the current threat landscape and emerging trends related to improvised explosive devices.**
- **States are encouraged to make use of the Improvised Explosive Device Lexicon of the Mine Action Service in order to guarantee the consistency of terms.**
- **States are encouraged to support further research on various dimensions of the improvised explosive device issue in order to better understand the multifaceted approach required to address the issue at forums. UNIDIR, along with other relevant research institutions, could be engaged by States in such tasks.**

Action 2: Support practical, operational measures to prevent and mitigate threats posed by improvised explosive devices

- With regard to mandates for peace operations, it would be beneficial if the Security Council were to take into account the situational context of the threat posed by improvised explosive devices and, when relevant, include comprehensive threat mitigation measures.
- The inadequate management of stockpile of conventional ammunition, which is often sourced for the manufacture of improvised explosive devices, should be a priority for States in mitigating the threat posed by the devices. Paying attention to surplus stocks is especially important. States are encouraged to utilize the International Ammunition Technical Guidelines in this regard.
- States are encouraged to further integrate security-related mandates into customs and border control activities with a view to preventing the diversion of precursor chemicals and other materials that could be used in the manufacture of improvised explosive devices. Resources should be allocated accordingly.
- States are encouraged to build the capacity to improve record-keeping and the collection of forensic evidence. Assistance to States is encouraged in this regard.

  States are encouraged to consider the voluntary provision of improvised explosive device-related training to troop-contributing countries by the United Nations, including with the support of the Mine Action Service.
- States are encouraged, where appropriate, to support the Mine Action Service in the development of standardized improvised explosive device-related training courses.
- States are encouraged to support the Mine Action Service in updating the International Mine Action Standards, utilizing the good practices identified in the United Nations standards for the disposal of improvised explosive devices, when setting out the requirements for clearance of the devices in strictly humanitarian environments.
- States are encouraged to make use of INTERPOL notices as well as relevant programmes, including Project Watchmaker.
- States are encouraged to examine the role, responsibility and further potential contributions of the private sector in combatting the threat posed by improvised explosive devices. States are encouraged, in particular, to support efforts to prevent the diversion of precursor chemicals and other materials in the supply chain.

Action 3: Take measures to protect civilians from, and support victims of, harm resulting from improvised explosive devices

- States are encouraged to take all feasible precautions to protect civilians from the effects of improvised explosive devices, including through the establishment or consolidation of appropriate awareness and risk education campaigns.
- Adequate victim assistance must be explored further by States and all relevant stakeholders, taking into account the frequent lack of emergency

care available at the time of an incident involving improvised explosive devices.

- States are encouraged to support further research and data collection on incidents involving improvised explosive devices in order to better inform measures to protect civilians from the harm caused by these devices.

Letter of transmittal

Letter dated 24 July 2018 from the Chair of the Board of Auditors addressed to the President of the General Assembly

I have the honour to transmit to you the second report of the Board of Auditors on the strategic heritage plan of the United Nations Office at Geneva.

(*Signed*) Rajiv **Mehrishi**
Comptroller and Auditor General of India
Chair of the Board of Auditors

Report of the Board of Auditors on the strategic heritage plan of the United Nations Office at Geneva

Summary

The strategic heritage plan involves the renovation of the United Nations Office at Geneva to meet the requirements of the Organization and address health, safety and working conditions. The Office serves as a global centre for, inter alia, the Organization's activities related to sustainable development, humanitarian, human rights, disarmament and disaster risk reduction. The United Nations Office at Geneva complex is the largest United Nations conference centre in Europe.

On 27 December 2013, the General Assembly, in its resolution 68/247 A, concurred with the need to address the health, safety, usability and access needs of the Palais des Nations. The Assembly stressed the importance of oversight with respect to the development and implementation of the strategic heritage plan and requested the Advisory Committee on Administrative and Budgetary Questions to request the Board of Auditors to initiate oversight activities and to report thereon to the Assembly. Pursuant to that resolution, the Chair of the Advisory Committee requested the Board of Auditors to consider the matter and to report thereon to the Assembly. In response, the Chair of the Board of Auditors confirmed on 27 August 2014 that the Board would audit and report on the strategic heritage plan. On 24 November 2015, the Board transmitted its first report on the strategic heritage plan (A/70/569). The Board also reported on the strategic heritage plan in its report on the financial statements of the United Nations for the year ended 31 December 2016 (A/72/5 (Vol. I) and A/72/5 (Vol. I)/Corr.1, chap. II, sect. L).

In its resolution 70/248 A, the General Assembly approved the proposed scope, schedule and estimated cost of the strategic heritage plan in the maximum amount of CHF 836.5 million. The project is expected to be completed in 2023. It is planned to be implemented in two main phases: the construction of the new building commenced in 2017 and is contracted to be completed in 2019, and the renovation of the existing buildings is envisaged to be completed in 2023.

The Board conducted the audit at the United Nations Office at Geneva in the periods from 18 September to 20 October 2017 and from 29 January to 9 February 2018.

Status of implementation of previous audit recommendations

Out of the eight recommendations made in the Board's first report on the strategic heritage plan (A/70/569), six (75 per cent) have been implemented and two (25 per cent) were overtaken by events, as indicated in the audit report (A/72/5 (Vol. I) and A/72/5 (Vol. I)/Corr.1) and its annex II. Out of the nine recommendations made in the audit report, five (56 per cent) have been implemented and four (44 per cent) are currently under implementation.

Activities planned and accomplished since the first report of the Board

In its first report on the strategic heritage plan, the Board indicated areas of concern that had implications for both timely completion of the project and its overall costs. Subsequently, the strategic heritage plan team has taken substantial steps towards creating a target-oriented framework. The main steps have been as shown below:

(a) The strategic heritage plan team and the Director of Administration, acting as project executive, hold regular meetings with stakeholders and town hall meetings. Working groups have been established to respond to specific objectives and meet regularly to discuss strategies proposed, approved and implemented with regard to the design of the buildings;

(b) The implementation of the flexible workplace strategy is proceeding. A study on utilization of the existing space within the Palais des Nations was performed. The outcome of that activity analysis highlighted that the individual office workspaces were utilized throughout the day at an average rate of approximately 51 per cent;

(c) The strategic heritage plan team, together with the risk management firm, has developed a risk management strategy consisting of two elements: a risk analysis tool that is used for analysing risks according to their impact on the timing and the finances of the project; and a risk register that provides specific actions to be taken with regard to each risk;

(d) An agreement with the Office of Central Support Services within the Department of Management has been reached to streamline procurement procedures for the strategic heritage plan;

(e) In connection with the technical and commercial evaluation of proposals for the construction of the new building, a committee to evaluate risk mitigation has been established. Among other things, the committee reviews both technical and commercial proposals for strategic pricing, subeconomic pricing and mismatches in pricing.

In terms of design and construction work, the following milestones had been reached at the time of audit completion in February 2018:

(a) The completion of enabling work, such as excavation work for the construction of the new building H in August 2017;

(b) The contract award for the work on building H on 4 September 2017 and commencement of the respective work;

(c) The integration of flexible workplace strategies in the design work contract for building H;

(d) The completion of the occupancy studies related to the implementation of flexible workplace strategies;

(e) The further development within the renovation design of measures to eliminate physical, communication-related and technical barriers to persons with disabilities;

(f) The detailed design for renovation work on buildings B2, C, D, S and E and technical design for buildings A and B1 have largely been completed;

(g) A decision has been taken to bring the design of all renovation work to the level of full technical design before tendering the renovation work contracts, meaning a consistent design-bid-build approach instead of the previous approach in which the work contractor would provide a significant portion of the design;

(h) The procurement process for technical design work for buildings B2, C, D and S was, as a consequence of the decision to adopt a consistent design-bid-build approach, largely completed.

The Board acknowledges the activities accomplished. Nevertheless, there is room for improvement in several areas addressed by the recommendations of the Board, information on which is presented below.

Introductory remarks

As of the most recent audit visit, the strategic heritage plan project was in the early stages of construction work on the new building and the procurement procedure for renovation work. The United Nations Office at Geneva has proven its willingness and flexibility with regard to adapting its procedures to the specific needs of the project, which is far from the day-to-day business of the Office. Hence, the procurement procedure for the work contract for the new building has been completed on schedule without major issues. Nevertheless, the already very ambitious overall project schedule has become even tighter, owing to delays in construction work on the new building, implementation of the flexible workplace strategies and pressures relating to the change in the implementation strategy for the renovation work. While this new implementation strategy might ultimately be beneficial to the project, it involves completing the design to a greater level of detail much earlier in the process, prior to tendering for the general contractor. The timeline for the remaining technical design for renovation work prior to tendering is considered to be especially ambitious. Delays in this design work may have an impact on the start of renovation work. It is a constant challenge for the strategic heritage plan project team to ensure that the contractors fulfil their contractual obligations. The strategic heritage plan team also needs to continue to clearly identify and address other risks in terms of time and cost, e.g. potential conflicts with the conference schedule.

Besides the concern related to the timely completion of the project, further improvements are needed in the fields of project governance, management of procurement and construction contracts; building design, construction and maintenance; and valorization. While management has implemented a risk management strategy, that strategy needs to be updated to align more closely with the guidelines for the management of construction projects document dated January 2016, produced by the Overseas Property Management Unit within the Office of Central Support Services at Headquarters. Furthermore, the contingency level and estimated budget overrun should be presented in a more transparent way; a process for usage of contingencies that meets the requirements of the guidelines for the management of construction projects also needs to be formalized.

Stipulated delay damages need to be enforced in accordance with the contract conditions; procurement procedures for keeping sensitive data confidential need to be enhanced; and the processing of change orders is crucial for managing construction contracts.

Given that the construction work is already ongoing, there was an urgent need at the time of the Board's most recent visit to decide how the flexible workplace strategies could be implemented on all floors of the new building. Furthermore, management needed to reconsider the implementation of flexible workplace strategies in the historic buildings of the Palais des Nations.

Regarding the building design, construction and maintenance, envisaged energy-saving targets need to be reviewed and reference baselines need to be determined. Otherwise, it will not be possible to measure the energy savings achieved through the implementation of the strategic heritage plan. Furthermore, a maintenance strategy for the renovation work is already needed, and the expected future maintenance and operational costs are yet to be calculated.

The General Assembly originally requested the Secretary-General to explore all possible alternative funding mechanisms in order to reduce the overall assessments on Member States and to report on concrete steps taken prior to its decision that all income from rental or valorization of land owned by the Organization in Geneva would be reflected in income section 2 and not to link it to the strategic heritage plan project.

While valorization proposals have been produced for plots of land with the highest valorization potential, a comprehensive valorization strategy for all parcels with valorization potential is still lacking.

The Board's key findings and recommendations are summarized below.

Key findings

Activities planned and accomplished during the reporting period

It had been envisaged that, by the end of the reporting period in February 2018, the enabling work for the new building H would have been completed and construction work on building H would have commenced. Concerning the renovation of the existing buildings, it had been envisaged that the detailed design would have been completed and the tendering for the work contract would have been launched.

The enabling work and the procurement process for work on building H, including the contract award, were completed on schedule; however, the milestones for the renovation of the existing buildings have not been fully achieved. The completion of the design, parts of which were delivered at least six months later than originally planned, was rescheduled and the procurement process for the renovation work has not yet started. This is mainly the result of a change in the implementation strategy. The design work is to be brought to a more complete level of design (and therefore completed later in the schedule), which will allow for tendering the work in a more traditional design-bid-build mode. The Board acknowledges the potential advantages connected to this strategy. Nevertheless, since the change in strategy occurred rather late in the process, it entails a tighter design schedule. This may lead to delays in the completion of the design and in the procurement timeline.

Project governance

The risk management strategy of the strategic heritage plan does not fully align with the guidelines for the management of construction projects. Furthermore, the risk reporting did not meet the requirements of the risk management strategy for part of 2017. A complete monthly report from the independent risk management firm, with detailed information regarding mitigation strategies, progress and delays, was lacking from April 2017 to September 2017. From April to July 2017, the firm reported only the top 10 risks, along with mitigation actions and progress, even though the risk management strategy stipulates that all critical and major risks, i.e. all risks with a risk score above 10, are to be reported monthly, along with detailed mitigation actions.

A project contingency allowance should be held in reserve for risks that occur and require financial mitigation. Therefore, it is essential that contingency be calculated accurately and appropriately. The contingency amount is defined in the guidelines for the management of construction projects as the amount of money or time needed above the estimate to reduce the risk of budget or time overruns to a level acceptable to the Organization. The contingency allowance determined by the project team as at December 2017 amounted to CHF 70.821 million. As highlighted in the 2017 annual progress report on the strategic heritage plan, in the supplementary financial information for the Advisory Committee on Administrative and Budgetary Questions, that was the result of a substantial increase in the base costs since the outset of the project, compared with a contingency allowance of CHF 87.634 million determined by the risk management firm. Since the contingency amount is to be added to the base project cost estimates, there is a gap of CHF 19.404 million. This represents an estimated budget overrun under current conditions. It results in a 53 per cent confidence level with regard to completing the project within budget, which means that the available contingency provision covers just 53 per cent of all potential risks.

In the second quarter of 2017, the confidence level with regard to completing the project within the budget was still at 81 per cent. Owing to this development, management needs to establish additional mitigation strategies in the event that the confidence level decreases below 50 per cent.

No structured process for the use of contingency is in place. The project team defines the use of contingency as unforeseen expenditures that are not included in the base cost estimate of the previous annual report on the strategic heritage plan. Thus, the accrued costs are tracked against the base cost estimate of the previous progress report. The method of using alternating base cost estimates to determine the amount of the contingency usage is not accurate. Additionally, the construction contingencies used are not reconciled with the risks that have occurred in the risk management system. Therefore, a full and transparent view of contingency usage is not ensured.

Project progress

To date, the contractor for the construction work has not met the stipulated deadlines for the early sections of work, which were 15 December 2017 and 16 February 2018. Nevertheless, these delays will not necessarily have an impact on the overall completion date for building H since other work does not depend on the completion of those early sections. Furthermore, unexpected ground conditions have required extra work, such as a retaining wall, for which an extension of time has been agreed with the contractor, meaning a revised completion date of 13 January 2020 instead of 29 November 2019. Further delays may arise as a result of the upcoming implementation of flexible workplace strategies in the design of building H. Delays in the completion of building H might affect the envisaged overall schedule of the strategic heritage plan project since it is planned that renovation work for buildings D and S will start after the occupation of building H. Building H is intended to be used as swing space during the renovation phase.

The schedule for the technical design and tender documentation for buildings B2, C, D and S is very ambitious. There is a high risk of not meeting the tight schedule for issuing tender documents. Such delays may lead to delays in the procurement process for the historic Palais, which in turn may ultimately lead to conflicts between the building A work and the conference schedule, with a risk of further delays and extra costs if mitigation actions are not successful.

Procurement and construction contracts

The tender documents for the construction contract for building H designated one supplier for access control and fire detection equipment and one supplier for video surveillance equipment. In response to a question by a bidder, management clarified that bidders would need to approach those two companies directly for such work during the bidding stage and that management expected the companies to be direct subcontractors of the bidders. Those subcontractors had a complete overview of all seven companies (out of 17 potential vendors invited, a list of which was published) that were preparing bids. Therefore, there was a general risk that, with the help of mandatory subcontractors, bidders could contact one another. To minimize any risks to the Organization, management should ensure that in future such companies sign specific non-disclosure agreements.

The tender documents for the construction contract for building H comprised a comprehensive draft contract for construction services. The contract terms were aimed at fully protecting the interests of the Organization. The bidders were requested to indicate whether they accepted the draft contract. The evaluation of acceptance or non-acceptance of the draft contract by bidders comprised a rather low percentage of total weight, whereby bidders received zero points for any remarks apart from grammatical comments on the contract conditions. For this reason, on the one hand,

the chances of winning the tender for bidders that rejected the contract clauses to a great extent were still too good. On the other hand, minor changes in contract clauses were penalized too severely.

Flexible workplace strategies

The contract for the main construction work on the new building H is based mainly on plans and designs issued in December 2016, without taking into consideration the full implementation of flexible workplace strategies. The construction work for the new building started at the end of 2017. Implementing flexible workplace strategies will lead to changes in the technical design of the architectural interior, drywall installation, the technical ceiling, electrical installation, plumbing and sprinkler systems, information and communications technology and audiovisual facilities, firewalls and smoke protection systems. According to the analysis of the consultants, these changes may lead to extra costs of up to CHF 7 million.

Building design, construction and maintenance

The data provided by the Facilities Management Section of the United Nations Office at Geneva and the strategic heritage plan project team regarding energy consumption at the Palais des Nations differ significantly. Therefore, the data are currently not a reliable basis for enabling the project team to predict possible energy savings and cost savings.

The renovation of the Palais will take place in single sections. Nevertheless, all technical building systems in single sections, such as heating, sanitary, lighting and electrical systems, are interconnected. The project team will hand over completed sections to the Facilities Management Section while the other sections are still under construction. At the time of the audit, the project team did not have a maintenance strategy to avoid duplication of efforts and there was a lack of clarity regarding what would happen during the period during which some sections had already been completed and other sections were still under construction. In the event of a breakdown of the technical building systems in a complete section, the responsibilities were not clear.

Potential alternative sources of project financing

The applicable and potential rental income of premises was not based on current contracts and data. Regarding the assumption of potential future rental income from the Office of the United Nations High Commissioner for Human Rights, the calculations were based on data from 2012 and 2013.

Although management already knew in 2014 about the valorization potential and realistic local lease conditions of several parcels owned by the United Nations Office at Geneva, it did not develop a timely strategy to achieve a higher rental income or sale at market value. The strategic approach for valorizing United Nations-owned land in Geneva that is not fully utilized by the United Nations, as best as possible and in a defined period of time, needs to be improved.

Main recommendations

The Board has made recommendations for improvements throughout the present report. The main recommendations are set out below.

Project governance

Management should:

(a) Update the risk management strategy for the strategic heritage plan to align it more closely with the guidelines for the management of construction projects, and risk reports should be prepared accordingly;

(b) Establish a process with additional mitigation strategies in the event that the confidence level with regard to completing the strategic heritage plan within the budget falls below 50 per cent;

(c) Ensure reconciliation of occurred risks and the corresponding contingency usage, and track the accrued cost against the initial baseline costs.

Project progress

Management should:

(a) Take appropriate action to accelerate the construction work on building H to mitigate the current delay and to finalize the drafted technical variations to the contract with the construction firm working on building H;

(b) Consider fallback options in the event of delays in design for buildings B2, C, D and S and in construction work for building A.

Procurement and construction contracts

Management should:

(a) Review, with regard to upcoming procurement procedures, whether it is inevitable that all bidders will need to contact a designated subcontractor during the bidding stage;

(b) Ensure that sensitive information on the procurement procedure is kept confidential by designated subcontractors, e.g. by concluding non-disclosure agreements that explicitly cover information connected to the procurement process;

(c) Consider whether, if the conditions of contract shall be subject to negotiation at all, the scoring of acceptance of the conditions of contract should be more flexible and differentiate between minor and major modifications requested by bidders.

Flexible workplace strategies

Management should urgently decide on how to implement flexible workplace strategies on all floors of the new building to avoid any further risk of amendments, delays and extra costs for the general contractor.

Building design, construction and maintenance

Management should:

(a) Base the calculation of energy savings on sound and reliable data on the energy consumption at the Palais des Nations before the implementation of the strategic heritage plan started, namely, before the start of construction work on the new building;

(b) Develop a sound and clear maintenance and operational strategy for the period during which sections of the Palais des Nations will have already been renovated while other connected sections will still be under construction. The

experience of the Facilities Management Section needs to be considered in the development of this strategy.

Potential alternative sources of project financing

Management should:

(a) Update and calculate the applicable and potential rental income of premises based on current contracts, data and realistic assumptions, taking into account the number of relocating staff, appropriate rental cost (using the arm's length principle) and an updated funding key for the Office of the United Nations High Commissioner for Human Rights;

(b) Develop a detailed valorization strategy for all parcels with valorization potential.

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Strategic heritage plan: key facts

Objective: To modernize and renovate the United Nations Office at Geneva complex at the Palais des Nations in Geneva	
CHF 836.5 million	Approved maximum overall cost
2017	Commencement of construction work on new building (building H)
2019	Envisaged completion of construction of new building and commencement of renovation of historic buildings A, C, D and S
2021	Envisaged completion of renovation of historic buildings A, C, D and S; commencement of renovation of historic building B and dismantling and renovation of existing building E
2023	Envisaged completion of renovation of existing buildings

A. Mandate, scope and methodology

1. The United Nations Office at Geneva is the representative office of the Secretary-General of the United Nations in Geneva. The Palais des Nations is a historical office of the United Nations and serves as the largest United Nations conference centre in Europe. The strategic heritage plan involves the renovation of the Palais and the establishment of a new building to meet the requirements of the Organization and address health, safety and working conditions.

2. In its resolution 68/247 A, the General Assembly stressed the importance of oversight with respect to the development and implementation of the strategic heritage plan and requested the Advisory Committee on Administrative and Budgetary Questions to request the Board of Auditors to provide oversight assurance and to report annually thereon to the Assembly.

3. Pursuant to the above-mentioned resolution, the Chair of the Advisory Committee requested the Board to consider the matter and report annually thereon to the General Assembly. In response, on 27 August 2014, the Chair of the Board confirmed that the Board would audit and report on the strategic heritage plan.

4. The first report of the Board (A/70/569) was submitted on 24 November 2015 and discussed by the General Assembly at its resumed seventieth session. The Board reconsidered its reporting timelines, keeping in mind that it would be more effective to align its reports with the progress report on the strategic heritage plan, and agreed on 7 September 2016 to submit its remaining four reports on the strategic heritage plan in July of 2018, 2020, 2022 and 2024. The Chair of the Board further confirmed that, in the event of any issue arising with respect to the strategic heritage plan that would need to be reported on at other dates in the intervening years, the Board would then include it in Volume I of its report on the financial statements of the United Nations. Accordingly, the Board reported its findings and recommendations of the intervening year, 2017, in its report on the financial statements of the United Nations for the year ended 31 December 2016 (see A/72/5 (Vol. I) and A/72/5 (Vol. I)/Corr.1, chap. II, sect. L).

5. The Board coordinated its audit with the audit of the Office of Internal Oversight Services (OIOS) and agreed that the topic of safety and security would be covered by the audit of OIOS.

6. The Board conducted its audit at the United Nations Office at Geneva from 18 September to 20 October 2017 and from 29 January to 9 February 2018. The audit exercise was conducted in accordance with General Assembly resolutions 74 (I) and 68/247 A, in conformity with the Financial Regulations and Rules of the United Nations and the International Standards on Auditing, as applicable.

B. Project oversight

7. Since the construction of the Palais des Nations in the 1930s and building E in 1973, the compound has undergone only minimal maintenance and repairs that were considered necessary for the Office's operations. Such limited maintenance over time has resulted in an increase in maintenance requirements and costs, as well as an increasing risk to the safety, security and health of United Nations delegates, staff and the more than 100,000 visitors per year. As a result of the gradual deterioration of the Palais des Nations buildings over several decades, the strategic heritage plan was initiated to renovate and modernize the compound. The United Nations Office at Geneva serves as a global centre for the Organization's activities related to sustainable development, humanitarian, human rights, disarmament and disaster risk reduction. The Palais de Nations is the largest United Nations conference centre in Europe. The buildings contain 34 major conference rooms and around 2,800 workspaces, including 222 touchdown workspaces for conference participants.

Key objectives of the project

8. The key objectives of the strategic heritage plan are:

(a) To guarantee and ensure the business and operational continuity of the Palais des Nations by maintaining its day-to-day business;

(b) To meet all relevant regulations related to fire protection, health and safety and compliance with the building code;

(c) To meet all relevant regulations relating to persons with disabilities, including provisions for accessibility and technology;

(d) To repair and update the building enclosure and the electrical, mechanical and plumbing systems in order to meet relevant health and safety regulations and reduce energy consumption and costs;

(e) To upgrade the existing information technology networks, broadcasting facilities and conference systems in compliance with industry standards;

(f) To optimize the use of the available interior spaces and conference facilities, providing flexible and functional conference rooms;

(g) To preserve the heritage of, prevent irreversible deterioration or damage to, and to restore and maintain the capital value of the Palais des Nations and its contents.

Budget

9. In its resolution 70/248 A, the General Assembly approved the proposed scope, schedule and estimated cost of the strategic heritage plan in the maximum amount of CHF 836.5 million.

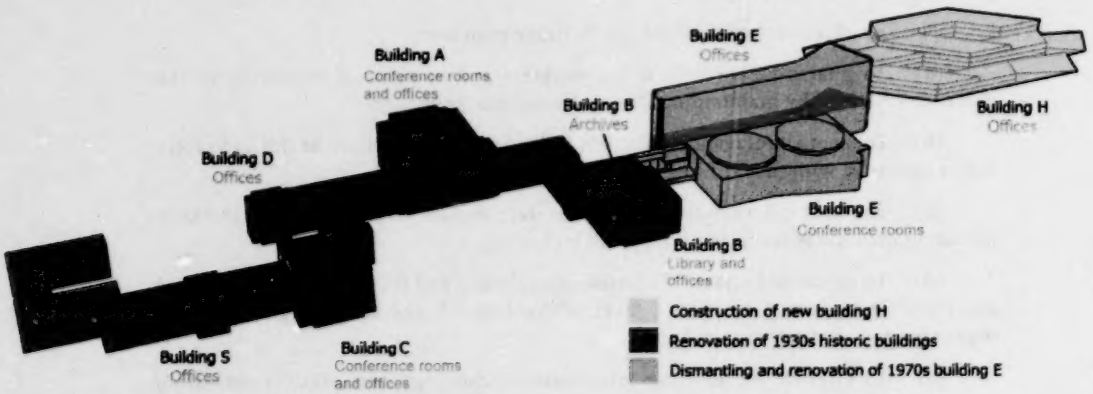
10. The Government of the host country has offered a loan package of CHF 400 million, covering both the new building (CHF 125.1 million) and the renovation of the existing buildings (CHF 274.9 million) at a zero per cent rate of interest. The loan contract was signed in April 2017.

11. The Secretary-General, in his third annual progress report (A/71/403 and A/71/403/Corr.1), estimated expenditures of CHF 49.886 million for 2017; the revised planned expenditures as set out in his fourth annual progress report (A/72/521) were CHF 26.322 million. According to Umoja, the expenditures on the strategic heritage plan during 2017 were CHF 24.013 million.

Project schedule

12. The project is expected to be completed in 2023 and will be implemented in two main phases (see annex I to the present document for schedules of project implementation according to the second and fourth annual progress reports of the Secretary-General (A/70/394 and A/70/394/Corr.1 and A/72/521, respectively)). Phase 1 comprises the construction of the new building (building H), which started in 2017 and is scheduled to be completed at the end of 2019. Phase 2 comprises the renovation of the historic buildings A, B, C, D and S (phase 2.1) and the dismantling and renovation of building E (phase 2.2). All of the elements of phase 2.1 will be tendered together; however, building B is scheduled to be renovated later, from 2021 on. The launch of the tender package for the historic buildings is planned for 2018. The construction work for phase 2 is scheduled to be carried out from 2019 to 2023. During that time, the new building will serve as temporary swing space.

Figure
Overview of the Palais des Nations and the new building



Source: Fourth annual progress report of the Secretary-General (A/72/521).

Annual progress report of the Secretary-General

13. The latest progress report of the Secretary-General on the strategic heritage plan of the United Nations Office at Geneva is the fourth annual progress report, and was submitted pursuant to General Assembly resolution 71/272 A. The report provides a summary of the planning and construction-related actions undertaken between 1 September 2016 and 31 August 2017.

14. Having considered the fourth annual progress report on the strategic heritage plan and the related report of the Advisory Committee (A/72/7/Add.25), the General Assembly decided in its resolution 72/262 A to appropriate the amount of $25.400 million (equivalent to CHF 24.600 million) for 2018.

C. Audit findings and recommendations

1. Status of implementation of previous recommendations

15. The Board reviewed the status of implementation of previous recommendations, taking into account the updated responses given by management in April 2018 to its audit report (A/72/5 (Vol. I) and A/72/5 (Vol. I)/Corr.1). Out of the eight recommendations made in the Board's first report on the strategic heritage plan (A/70/569), six (75 per cent) had been implemented and two (25 per cent) had been overtaken by events, as reported in the audit report and annex II hereto. Out of the nine recommendations made in the audit report (A/72/5 (Vol. I) and A/72/5 (Vol. I)/Corr.1), five (56 per cent) have been implemented, four (44 per cent) are under implementation and no recommendations have been overtaken by events or not implemented. Annex II below provides a more detailed summary of the action taken in response to the recommendations made by the Board in its audit report.

2. Activities planned and accomplished since the first report of the Board

16. In its first report on the strategic heritage plan, the Board indicated areas of concern that had implications for both timely completion of the project and its overall costs. Subsequently, the strategic heritage plan team took substantial steps towards developing a target-oriented framework. The main steps are the following:

(a) The strategic heritage plan team and the Director of Administration, acting as project executive, hold regular meetings with stakeholders and town hall meetings. Working groups have been established to respond to specific objectives and meet regularly to discuss strategies proposed, approved and implemented in the design of the buildings;

(b) The implementation of the flexible workplace strategy is proceeding. A study on utilization of the existing space within the Palais des Nations was performed. The outcome of that activity analysis highlighted that the individual office workspaces were utilized throughout the day at an average rate of approximately 51 per cent;

(c) The strategic heritage plan team, together with the risk management firm, has developed a risk management strategy consisting of two elements: a risk analysis tool that is used for analysing risks according to their impact on the timing and the finances of the project; and a risk register that provides specific actions to be taken related to each risk;

(d) An agreement has been reached with the Office of Central Support Services within the Department of Management to streamline procurement procedures for the strategic heritage plan;

(e) In connection with the technical and commercial evaluation of proposals for the construction of the new building, a committee to evaluate risk mitigation has been established. Among other things, the committee reviews both technical and commercial proposals for strategic pricing, subeconomic pricing and mismatches in pricing.

17. In terms of design and construction work, the following milestones had been reached at the time the audit was completed in February 2018:

(a) Enabling work, such as excavation work for the construction of the new building H, was completed in August 2017;

(b) The contract award for the work on building H was awarded on 4 September 2017 and the respective work has commenced;

(c) Flexible workplace strategies have been integrated into the design work contract for building H;

(d) Occupancy studies related to the implementation of flexible workplace strategies have been completed;

(e) Measures to eliminate physical, communication and technical barriers to persons with disabilities have been further developed within the renovation design;

(f) The detailed design for renovation work on buildings B2, C, D, S and E and the technical design for buildings A and B1 has largely completed;

(g) A decision has been taken to bring the design of all renovation work to the level of full technical design before tendering the renovation work contracts, meaning a consistent design-bid-build approach instead of the previous approach in which the work contractor would provide a significant portion of the design;

(h) The procurement process for technical design work for buildings B2, C, D and S has largely been completed, as a consequence of the decision regarding a consistent design-bid-build approach.

18. The Board acknowledges the activities accomplished. Nevertheless, there is room for improvement in several areas addressed by the recommendations of the Board, information on which is presented below.

3. Project governance

19. The Overseas Property Management Unit within the Office of Central Support Services has developed guidelines for the management of construction projects for implementing large-scale construction projects. The guidelines were completed and issued to Headquarters and offices away from Headquarters in 2016 (see A/70/697, para. 23).

Risk reporting

20. The guidelines for the management of construction projects give detailed information on risk reporting, in their chapter 9.6.3 and 9.6.6. For each reporting period, a consolidated risk report with an updated risk register and qualitative and quantitative risk reports should be prepared. As stated in chapter 9.6.3 of the guidelines, qualitative and quantitative risk reports should include the following:

(a) Qualitative risk reports should provide information on the identified risks and their scores, in descending order by risk score. A list of top-scoring risks, knowledge of which could be essential to the project, should be provided to senior management in order to highlight risks for priority attention during the employment of risk mitigation strategies. The top risks may be further sorted by project phase, likely risk trigger date, and date for the commencement of mitigation strategies;

(b) Quantitative risk reports should present results of the quantitative analysis with potential impacts on the project, their associated financial and time implications, the anticipated total project costs and, accordingly, the project completion date. Furthermore, provisions relating specifically to project cost and duration contingency, as well as to the drawdown of contingency funds after the occurrence of a risk event, should be determined.

21. The updated risk register should show the total number of active risks to the project, the closed risks, new risks and any changes in the risk scoring since the previous reporting period. Furthermore, a grouping by phase, performance objective, work category and source of risk is to be included. As further stipulated in chapter 9.6.6, paragraph f, of the guidelines, the progress of implementation of any

risk mitigation actions, as well as delayed and unsuccessful mitigation actions, should be reported.

22. Regarding the updated risk management strategy for the strategic heritage plan dated 6 February 2018, the Board notes that the guidelines are not fully reflected in the updated strategy. Detailed information regarding risk reporting (chap. 5.10.1 of the risk management strategy) is lacking. For example, information about the quantitative analysis, with potential impacts on the project, their financial implications and the anticipated total project costs, is lacking. With regard to the risk mitigation strategies and progress thereon, the risk management strategy includes only the most significant risks and not all risks, as requested in chapter 9.6.6, paragraph f, of the guidelines. Beyond that, the risk management strategy, in its in chapter 5.10.1, neither distinguishes between qualitative and quantitative risk reports nor defines the reporting period. Although the risk management firm prepares a quantitative analysis, with potential impacts on the project, their financial implications and the anticipated total project costs, in the quarterly quantitative report, this regulation is lacking in chapter 5.10.1 ("Risk reporting") of the risk management strategy. Furthermore, it is not clearly stated which regulation of chapter 5.10.1 is to be applied monthly and which is to be applied quarterly. Therefore, the risk management strategy is not fully aligned with the guidelines for the management of construction projects.

23. As stated in the fourth annual progress report of the Secretary-General on the strategic heritage plan of the United Nations Office at Geneva, the independent risk management consultant produced quarterly assessment reports for the project owner, which were sent simultaneously to the Office of Central Support Services at Headquarters, independently of the project team. It is further reported that the integrated risk management specialist prepared monthly updates to the risk register for the project director and the project stakeholders (see A/72/521, paras. 6 and 7).

24. The Board acknowledges that management separated the two functions of independent and integrated risk management by an amendment to the contract with the risk management firm (see annex II, recommendation no. 2, below). The amendment stipulates that the function of independent risk management is to produce quarterly assessment reports for the project owner, the project executive and the Office of Central Support Services; the function of integrated risk management is to prepare monthly update reports to the risk register for the project director and project stakeholders. Nevertheless, the Board noted that the quarterly assessment reports and the monthly update reports to the risk register reports were prepared by the same person at the risk management firm.

25. Management stated that the accountability of the risk management firm was not compromised by the fact that the same member of the risk management team issued both the monthly report to the strategic heritage plan team and the quarterly assessment reports.

26. The Board emphasizes the importance of the full segregation of the independent and integrated function of risk management.

27. The Board also noted that the quarterly assessment report was reviewed by members of the project team. Therefore, the quarterly assessment reports, which should provide the project owner with an independent risk review, were not produced without the influence of the project team. Following the recommendation from the Board, management changed the terminology "review through the strategic heritage plan team" of the quarterly quantitative risk report to "information only".

28. The Board further noted that the reporting frequency was not as stated in the fourth annual progress report and that the risk reporting had not met the regulations

of the risk management strategy of the strategic heritage plan in the past few months. Complete monthly reports from the independent risk management firm with detailed information on mitigation strategies, progress and delays were lacking from April to September 2017. From April to July 2017, only the top 10 risks were reported, along with mitigation actions and progress. In accordance with chapter 5.3.3 of the risk management strategy, all critical and major risks, which are those risks with a risk score above 10, are to be reported monthly, along with detailed mitigation actions. All other risks are to be reported at least quarterly.

29. Furthermore, the content of the quarterly risk reports was inconsistent. For example, an additional cafeteria budget contribution of CHF 841,000, which is not part of the budget of the strategic heritage plan project, was included in parts of risk management quarterly report no. 1, 2017/2018, for the first time but was not always indicated as included. Consequently, the figures of earlier reporting periods are not comparable with those in current reports. The Board found that the risk reporting had weaknesses especially with regard to the use of contingencies.

30. Management stated that the independent risk management team was contractually committed to provide a quarterly quantitative and qualitative report for the project owner and a monthly update of risks with a score of 10 or above for the strategic heritage plan team. In addition, the risk management team had produced a more comprehensive monthly report at the end of 2016 and in early 2017, which was expected to be reinstated in 2018. Management noted that paragraph 7 of the fourth annual progress report on the strategic heritage plan referred to a "regular" basis rather than to a "monthly" basis.

31. Regarding the costs of the additional cafeteria work, management further stated that the costs were included in the base estimate for the strategic heritage plan and therefore the contribution of CHF 841,000 had also been included in the budget. The issue would be reviewed with the risk management consultant.

32. While taking note of the decision of management to focus on the most significant risks, which are all critical and major risks (with a risk score of 10 or above), the Board noted that during 2017 only the top 10 risks, and not all risks with a score of 10 and above, were reported monthly.

33. The Board further noted that chapter 5.3.3 of the risk management strategy of the strategic heritage plan clearly set the reporting frequency as monthly rather than on a regular basis. The Board underlines that the regulations in regard of the reporting frequency of the risk mitigation actions are inconsistent within the risk management strategy. As stated in chapter 5.3.3, all critical and major risks are to be reported monthly with detailed mitigation actions; all other risks are to be reported at least quarterly. Contrary to that, chapter 5.10.1 stipulates only that the risk mitigation strategies and progress with regard to those strategies are to be reported for the most significant risks, which contain the critical and major risks. Therefore, the risk management strategy lacks a reporting obligation with regard to the residual risks.

34. Concerning the reporting of the use of contingencies, the Board suggests that the reports include contingency usage logs, explanations for contingency drawdowns and projected contingency requirements.

35. Management considered that the risk management strategy was generally in line with the United Nations guidelines. In the view of management, the actions provided for under that strategy went further in terms of risk management than those provided for under the guidelines for the management of construction projects. Management also emphasized that the strategic heritage plan had its own governance structure and risk management process (tailored for the specific circumstances of the project), which Member States had endorsed and to which they had reported.

36. The Board recommends that management update the risk management strategy of the strategic heritage plan to align it more closely with the guidelines for the management of construction projects; risk reports should be prepared accordingly.

37. Furthermore, the Board recommends that the additional cafeteria budget remain separate from the initial budget, since it is not part of the strategic heritage plan budget, in order to ensure full transparency.

38. Management agreed with the recommendation to separate risk reporting for the additional cafeteria budget from risk reporting for the approved strategic heritage budget.

Contingency and confidence level of completing the project within the budget

39. Pursuant to chapter 9.6.7 of the guidelines for the management of construction projects, a project contingency allowance should be held in reserve for risks that occur and require financial mitigation. Therefore, it is essential that contingency be calculated accurately and appropriately.

40. Contingency is a financial reserve to cater for retained risks, used in conjunction with other risk treatment strategies as a part of an overall risk management strategy. The contingency amount is defined in the guidelines as the amount of money or time needed above the estimate to reduce the risk of budget or time overruns to a level acceptable to the Organization.

41. The approach used to determine the required contingency amount should be aligned with the stage of the project development process, particularly the level of detail known about the project design, in addition to the risk profile of the project. Other factors, such as complexity and benchmarks based on past project cost performance, should also be taken into consideration.

42. Once a contingency estimate has been prepared, it should be added to the base project cost estimates in order to indicate the likely total cost of the project. The inclusion of contingency estimates within the total project cost estimate would ensure that the anticipated total financial commitment for a project is presented to the project sponsor.

43. As stated in the fourth annual progress report on the strategic heritage plan and in risk management quarterly report no. 2, 2017/2018, the project team determines a contingency allowance as the difference between the approved budget and the sum of the up-to-date base cost estimate and escalation. The residual represents the amount of contingency (budgeted contingency).

44. It is the risk management firm, however, that determines the contingency amount with an iterative risk analysis. It simulates a probabilistic risk model and provides the overall probabilistic cost exposure, based on the estimated costs of the current risks and uncertainties relating to the project. Given the likelihood and potential impact of those risks, the firm calculates the recommended level of contingency provision required to complete the full scope of the project and achieve all its identified benefits and objectives.

45. The contingency amount reflects a confidence level of 80 per cent, which is the prudent industry benchmark level of covering the eightieth percentile of all potential risk impact combinations of the conducted simulation (P80 amount). This means that at least 80 per cent of all combinations are covered by the available contingency provision. The process is continually updated throughout the duration of the project so as to properly reflect potential newly arisen or evolving risks and non-materialized risks.

46. The Board noted that the approach of the risk management firm met the requirements of the guidelines for the management of construction projects.

47. The result of the contingency allowance determined by the project team as at December 2017 amounted to CHF 70.821 million, owing to a substantial increase in the base costs since the outset of the project, compared with a contingency allowance of CHF 87.634 million determined by the risk management firm. Since the contingency amount is to be added to the base project cost estimates, there is a gap of CHF 19.404 million,[1] which represents an estimated budget overrun under current conditions. This results in a 53 per cent confidence level of completing the project within budget.[2] In the second quarter of 2017, the confidence level of completing the project within budget was still at 81 per cent. Owing to this development, the Board considers it necessary that management establish additional mitigation strategies in the event that the confidence level falls below 50 per cent.

48. Management stated that, in an ideal situation with no budget constraints, the P80 amount from the risk management firm would be added to the actual updated base cost forecast to give a forecast outturn for the project. As risks fluctuated, that outturn could be higher or lower than the project envelope at any given time. Nevertheless, to implement the project within the budget of CHF 836.5 million, management adjusted the available contingency to fit within the project envelope. Comprehensive mitigation actions were undertaken to reduce the gap between the budgeted contingency and the contingency determined by the risk management firm. Management underlined that, in the event that such actions were not sufficient to bridge the gap, additional mitigation actions such as scope review and adjustments or further financing might need to be considered. Management pointed out that it was too early to take such additional actions at the current stage since the detailed design and the contracting of the work for the existing building still had to be done. The current gap of CHF 19.404 million would indicate a budget overrun should no mitigation action be taken until project completion. Management stated its confidence that the existing process for the strategic heritage plan to take appropriate mitigation actions for each risk item would bring the temporarily predicted budget overrun down within a reasonable period of time as the project progressed.

49. In the opinion of the Board, it is not too early to develop additional mitigation strategies since the confidence level of completing the project within the budget has already decreased to 53 per cent.

50. The Board recommends that management present the budgeted contingency and the contingency amount with a confidence level of 80 per cent and an estimated budget overrun in a more transparent way.

51. Furthermore, the Board recommends that management establish a process with additional mitigation strategies in the event that the confidence level of completing the strategic heritage plan within the budget falls below 50 per cent.

Use of contingencies

52. Pursuant to chapter 9.6.7 of the guidelines for the management of construction projects, the use of contingency allowances should be formally documented and controlled through a structured procedure that includes contingency expenditure authorization, ongoing monitoring and reporting. Crucial parts of the guidelines on contingencies are summarized as follows:

[1] SHP budget: CHF 836.5 million; base cost estimate: CHF 738.694 million; escalation: CHF 29.576 million; contingency: CHF 87.634 million; base cost estimate + contingency + escalation = CHF855.904 million => a budget overrun of CHF19.404 million.

[2] The confidence level was calculated by the risk management firm with an iterative risk analysis.

(a) Contingency is a financial reserve to cater for retained risks, used in conjunction with other risk treatment strategies as part of an overall risk management strategy. The contingency amount varies owing to the lack of information in the different project stages. The estimates should narrow as the scope becomes more refined, comprehensive project information becomes available and detailed design is undertaken;

(b) After it is determined that the use of contingency is required, the project management team should submit a contingency expenditure request to the entity responsible approval of such requests. Formal requests should provide detailed information on the forecasted risk event, the phase of the project during which it might occur, the likelihood of its occurrence, the severity of its impact, the potential impact on project objectives and the amount of contingency allowance required to mitigate the risk. All requests should be aligned with the contingency cost and programming estimates prepared during the risk analysis stages;

(c) The approval of contingency expenditure requests should be in line with the delegation of authority of the project. The delegation of authority could depend on the level of project risk or the level of control required, among other things, or it could be per mandates from the Organization's governing bodies. It should be assigned to the appropriate governance level to efficiently manage and control the corresponding risk so as to maximize project cost performance and promote risk mitigation efficiency;

(d) Each of the contingency cost components should be discretely monitored and tracked against initial baseline estimates. The use of contingency should be reviewed by work package and by project stage/phase. Significant trends should be documented. Furthermore, the actual contingency expenditure should be tracked against remaining contingency allowances for the financial year and for the entire duration of the project;

(e) Reports on the use of contingency allowances should be prepared on a regular basis and coordinated with the monthly progress reporting during the project implementation phase. The reports should include contingency use logs, explanations for contingency drawdowns and projected contingency requirements for the financial year and for the entire duration of the project.

53. In its resolution 70/248 A, the General Assembly decided that unused contingency funds might be carried over to subsequent years and reallocated as new risks emerged and older risks were retired and that, at the conclusion of the project, all remaining unused contingency allowances should be returned to the Member States.

54. The Board reviewed the risk reports, the risk management strategy and the strategic heritage plan manual and noted that no structured process for the use of contingency was in place.

55. The Board noted that the use of contingency was defined as unforeseen expenditures that had not been included in the base cost estimate of the previous annual progress report on the strategic heritage plan. Thus, the accrued costs had been tracked against the base cost estimate of the previous progress report.

56. The Board noted that the method of using alternating base cost estimates for determining the amount of the contingency use was not accurate. The guidelines for the management of construction projects stipulated that the accrued costs were to be tracked against the initial baseline to determine the amount of contingency used. The current situation regarding the construction work on building E was a good example for highlighting the issue. As stated in the risk management quarterly report no. 1, 2017/2018, the base cost estimate for the work had increased since the previous

quarter by approximately CHF 20 million as a result of better knowledge of the necessary work. Nevertheless, for the determination of the contingency usage — once work was commissioned — the initial baseline for building E should be used for tracking against the accrued costs.

57. Furthermore, the Board noted during discussions with the project team that the contingency amount had been determined for the project in total and subsequently distributed from the risk management firm to the following groups: buildings A, B1, B2, C, D, S, E1 and E2; programme management; early work; and construction procurement. The strategic heritage plan project team then distributed each group's total amount according to project year. The yearly contingency amount thus equalled the portion of the base cost estimate of the single year in relation to the base cost estimate in total (yearly budgeted contingency). The probability and the impact of the contingency-related risks were not considered, however, in determining the annual assessment amounts. As a result, the yearly budgeted contingency might not always be sufficient if a major risk occurred, since the estimated costs of a building were not an indicator of the occurrence and the impact of the risks.

58. The Board also noted that reporting of contingency use had not been included in all of the risk reports that had been provided, although the risk management strategy of the strategic heritage plan stated in chapter 5.10.1 that contingency would be reported using the baseline level in past periods and current levels.

59. The Advisory Committee on Administrative and Budgetary Questions considered that, in view of the provisions of section X of General Assembly resolution 70/248 A regarding unused contingency funds, a year-by-year account of budgeted, used and carried-forward project contingency amounts needed to be clearly presented (see A/71/622, para. 31).

60. The Board noted that, in paragraph 84 of the fourth annual progress report on the strategic heritage plan, the use of contingency for the period 1 September 2016 to 31 August 2017 had been stated with an amount of CHF 1.149 million. Furthermore, in paragraph 75 of that report, a contingency allowance of CHF1.7 million had been mentioned, and was to be carried over into the following year. The contingency allowance received in 2017 was not presented. Therefore, the use of contingency was not transparent. Beyond that, the Board could not identify a contingency expenditure request and the corresponding approval of the contingency used in the provided documents.

61. Management highlighted that it distinguished between the general contingency (financial reserve for the entire strategic heritage plan project) and the construction contingency that had been approved as part of the procurement process for individual procurement contracts with individual vendors. A change order process had been documented as part of the procurement process. Management agreed with the Board about the need to establish a process for the use of the contingency financial reserve against the general contingency. This would include the preparation of contingency expenditure requests and their approval by the designated actors within the strategic heritage plan project team and management.

62. Management stated that the use of contingency was for drawdown of contingency against specific items of actual expenditure or financial commitments that had already taken place. The evolution of projected contingency requirements as the project progressed was not treated as drawdown of contingency because the triggering event had not yet occurred and the Organization was not yet financially committed.

63. Management further stated that it would include the missing reporting of contingency in future risk reports.

64. In the view of management, the cost had so far not been tracked against the initial baseline owing to the requirements of the General Assembly and the Advisory Committee on Administrative and Budgetary Questions, which demanded a tracking of the contingency expenditures against the annual approved budget.

65. The Board emphasizes the importance of cost tracking against the initial baseline for transparent cost control and development, as well as for the drawdown of the contingency usage. Furthermore, the Advisory Committee requested an annual breakdown of budgeted and unused contingency amounts from the outset of the project to the present (see A/71/622, para. 27).

66. The Board noted that the process regarding the use of construction contingency was based on a fixed percentage, which contradicted the main probabilistic approach of the risk management firm. Since that procedure was a best practice in a procurement process and included an approval by the senior management, the procedure could be seen as in line with the United Nations guidelines. Nevertheless, it would be necessary to reconcile the construction contingency used with the occurred risks in the risk management system to ensure a full and transparent view of the contingency usage.

67. The Board recommends that management establish a process for the use of general contingency allowances which aligns more closely with the guidelines for the management of construction projects.

68. The Board also recommends that management ensure reconciliation of occurred risks and the corresponding contingency usage.

69. The Board further recommends that management track the accrued cost against the initial baseline costs.

Appropriation and assessment scheme

70. The General Assembly postponed its decision on the scheme and currency of appropriation and assessment for the strategic heritage plan to its seventy-third session (see resolution 72/262 A, para. 20).

71. The budget of the strategic heritage plan of CHF 836.5 million for the period 2014–2023 was approved by the General Assembly in its resolution 70/248 A. The budget is financed through an interest-free Swiss loan of CHF 400 million and CHF 436.5 million in Member State contributions for the residual amount.

72. As per article 1 of the loan agreement, the amount of CHF 400 million is to be apportioned as follows: CHF 125.1 million is assigned to the new building and CHF 274.9 million to the renovation of the existing buildings. Project management costs, associated costs and contingencies are not covered by the loan.

73. Furthermore, the United Nations is requested to determine the required amount of funds in April for payment in January of the following year (see art. 2, para. 2.1, of the loan agreement). Therefore, the payments are not flexible regarding changes in the cost plan that may lead to a cash flow risk if Member State contributions will not offset those costs. Consequently, the remaining costs which are not eligible to be covered through the loan would need to be financed by the Member States, whose assessed contributions may not always come in time. Depending on the scheme of appropriation and assessment decided by the General Assembly, this could also result in a cash flow risk.

74. For the period 2014–2018, Member States have appropriated contributions up to an amount of CHF 109.4 million (see General Assembly resolutions 68/247 A, 69/262, 70/248 A, 71/272 A and 72/262 A). Thus, the project costs, which remain to

be financed through the Member States, amount to CHF 325.2 million[3] (excluding the repayment of the Swiss loan).

75. The Secretary-General proposed three possible options for an appropriation and assessment scheme in his previous progress reports and reiterated the options in his latest report (see A/72/521, paras. 89–96), which are as follows (taking into account the Member State contributions of 2018):

(a) One-time up-front appropriation and assessment: The remaining project cost of CHF 325.2 million for the residual project period 2019–2023 would be appropriated in its entirety in 2019, along with a one-time up-front assessment for the related share of each Member State, based on the regular budget scale assessment applicable to 2019;

(b) Multi-year appropriation and assessment: Such assessment could be based either on the estimated expenditures for each financial period or on the average annual projected expenditures as an equal amount;

(c) One-time up-front appropriation with a mix of one-time and multi-year assessment: The remaining project costs of CHF 325.2 million for the residual project period 2019–2023 would be appropriated in their entirety in 2019, but each Member State would be able to decide whether its assessment would be in the form of a one-time up-front payment or payments over a multi-year period. The phasing of the multi-year period could be based as under option (b).

76. The Board noted that options (a) and (c) of the assessment and appropriation scheme would be advantageous to the strategic heritage plan project owing to an enormous increase in the cash position following the decision by the General Assembly and would thus provide the most flexibility for the project owner to respond to unforeseen needs and any cash flow risks that might arise during the implementation of the project.

77. The cash flow risk at the present stage of the project is steadily increasing owing to the progress of the project; further refinements and a higher level of design detail for the new building and the renovation of the existing buildings may result in cost plan changes which may then not be covered by the annual funding. That may cause bottlenecks and delays in work in progress and payments to contractor firms, which could jeopardize the success of the strategic heritage plan project and could lead to budget and time overruns.

78. The Board considers option (b), by contrast, as not being suitable to mitigate this cash flow risk since both the portion provided by the Swiss loan and the portion covered by Member State contributions are fixed annually and in advance. Hence, access to the working capital fund of the programme budget established under regulation 4.2 of the Financial Regulations and Rules of the United Nations should be granted, which is the case as long as the use of the multi-year account for construction in progress under the programme budget of the United Nations is extended by the General Assembly.

79. The currency of the appropriation and assessment for the strategic heritage plan can be either United States dollars or Swiss francs. In any case, the currency needs to be decided upon by the General Assembly to minimize the currency risk exposure.

80. Management agreed with the observation and stated that, while options (a) and (c) might be advantageous in terms of the cash flow risk, there were risks of negative interest rates on such cash deposits if they were denominated in Swiss francs. Also,

[3] SHP budget: CHF 836.5 million; Swiss loan: CHF 400 million; Member State contributions 2014–2018: CHF109.4 million. In addition, a donation of CHF 1.9 million will be used in 2019.

the additional risk of exchange rate fluctuations and potential cost overruns if the appropriation was in United States dollars (as the predominant expenditures were in Swiss francs) should be taken into account.

81. Management further stated that, in addition to lacking an agreement on the scheme of assessment, there was also no decision or agreement on the modalities for appropriation and assessment of the funds required for the repayment of the Swiss loan, or indeed on where this budget item should be located in the overall United Nations budget, bearing in mind that any missed loan repayments might lead to the loan becoming repayable in its entirety immediately. The Board concurs with the view of management that this is a very important issue that will last many years beyond the life of the strategic heritage plan project and that needs to be addressed, since repayments will start in 2020 for the new building.

82. **The Board recommends that management underline the importance of a decision to be taken by the General Assembly at its seventy-third session regarding the scheme and currency of appropriation and assessment for the strategic heritage plan to secure the financing of the project.**

83. **Furthermore, the Board recommends that special attention be given to the importance of the decision on the modalities for appropriation and assessment of the funds required for the repayment of the Swiss loan.**

84. Management concurred with the recommendations.

4. Project progress

Background

85. In its resolution 72/262 A, the General Assembly renewed its request for ensuring that the strategic heritage plan was completed within the approved budget and the envisaged time schedule.[4]

86. For a clear understanding of the project schedule, the Board recalls that the strategic heritage plan construction work consists of three main sections: the construction of the new building H (including the enabling work which was tendered separately), the renovation of the historic 1930s buildings A (assembly hall), B1 (historical archives), B2 (library, offices), C, D and S and, eventually, work relating to the 1970s building E (renovation of the conference rooms, dismantling of the office tower).

87. The schedules of these three main sections are interdependent. The strategic heritage plan team currently plans to use the offices of building H as swing space for the staff that will have to leave the offices of buildings C, D and S during the renovation work. The offices of buildings C, D, H and S are intended to compensate for the decrease of office space that will result from the dismantling of building E's office tower. Therefore, the renovation work for buildings C, D and S is scheduled to start after the completion of the building H work. Accordingly, the work on building E is scheduled to start after the completion of the work on buildings C, D and S.

88. The Board reviewed the planned and the actual project progress and made the below observations:

[4] Resolution 72/262 A, sect. XVI, paras. 5, 6 and 11.

(a) Construction of the new building H

Delay in project progress

89. The United Nations Office at Geneva and the winning contractor signed the contract for the construction work for the new building H as scheduled on 4 September 2017. Prior to this, an extension of the bidding phase owing to several clarifications on the tender documents had been successfully mitigated by an accelerated completion of the tender evaluation and award recommendation period.

90. The contract stipulates eight milestones and three major sections, all with fixed deadlines. Additionally, defined delay damages for the three sections were established by the contract. If the contractor fails to finish a section on time, it will be obliged to pay the following fixed delay damages (in accordance with contract schedule 1, subclauses 1.1 and 8.7):

(a) Finalization of section 1: Slab strengthening above and below ground in parking structure P10, with a deadline of 15 December 2017. Delay damage per day: CHF 1,500;

(b) Finalization of section 2: Covering of the existing spiral car ramp next to building E, with a deadline of 16 February 2018. Delay damage per day: CHF 1,300;

(c) Finalization of section 3: Completion of the new permanent building, with a deadline of 29 November 2019. Delay damage per day CHF 44,500.

91. Pursuant to the contract, the contractor has to provide several documents as a condition for the commencement of the execution of the work, inter alia, documents relating to insurance, a bank guarantee for performance and a parent company guarantee. Since the contractor initially had not submitted documents that were acceptable to the United Nations Office at Geneva, the Office issued the commencement of work certificate recording the fulfilment of the conditions only on 27 October 2017.

92. Work was initially expected to begin on 6 October 2017; however, the contractor did not start on time. Instead, the contractor started work on 28 November 2017.

93. The contractor did not finish the strengthening of the slab in the parking structure before the deadline of 15 December 2017. Therefore, the stipulated deadline for section 1 was not met. The work for the reinforcement of the parking structure was still ongoing during the Board's audit in February 2018.

94. During the audit in January and February 2018, the Board pointed out that it was no longer possible for the contractor to meet the deadline for section 2 (covering the existing spiral entrance ramp of the parking structure). A part of the spiral ramp had to be demolished and covered with a slab for the future plaza of the new permanent building.

95. As long as the spiral car ramp (section 2) is not finished, it is not possible to start with the underground utility link for the new permanent building, since they are next to each other.

96. According to the monthly project report of December 2017, the project team estimated that a new proposed retaining wall and crane base would affect the date of contractual completion (referred to as "substantial completion") for building H (section 3), which is 29 November 2019, by one month.

97. The contractor was also unable to achieve another targeted mark, with a fixed date of 15 December 2017: milestone number one, the opening of a new entrance from the Chemin de l'Imperatrice with security surveillance. The target was neither implemented nor begun until February 2018 owing to issues related to agreement on

localized work for which a permit was required. This milestone is not on the critical path of the project schedule.

98. The Board stated that management had not been able to ensure that the contractor met the stipulated deadlines for section 1 and 2 and for the first milestone.

99. The Board assumes that further delays may arise as a result of the upcoming implementation of flexible workplace strategies in the design of building H.

100. Delays in the completion of building H might affect the envisaged overall schedule of the strategic heritage plan project since it is planned that the renovation work for buildings D and S will start after the completion of building H, which is intended to be used as swing space during the renovation phase.

101. Furthermore, the Board noted that, since the beginning of the construction onsite, five variations of the contract had been drafted. As at the end of January 2018, none of them had been finalized or aligned between the employer and the contractor.

102. **The Board recommends that management enforce the stipulated delay damages of section 1 (finalization of slab strengthening above and below ground in parking structure P10, with a deadline of 15 December 2017) and section 2 (finalization of covering of the existing spiral car ramp, with a deadline of 16 February 2018) of CHF 1,500 and CHF 1,300 per day, respectively, to avoid any financial damage to the project.**

103. **Furthermore, the Board recommends that management take appropriate action to accelerate the construction work on building H to mitigate the current delay and to finalize the drafted technical variations to the contract with the construction firm working on building H.**

104. Management accepted the first recommendation and stated that it would enforce delay damages in accordance with the contract when appropriate, taking into account site conditions and design issues beyond the control of the contractor.

105. Management also accepted the recommendation on acceleration measures and stated that it would seek opportunities to accelerate the construction work on building H to mitigate delays incurred to date, within the technical and contractual parameters noted above.

106. Management acknowledged that the contractor had failed to meet the stipulated deadlines for sections 1 and 2. Nevertheless, the contractor's stipulated completion date remained unchanged and management would hold it to its contractual commitments, adjusted where appropriate to reflect delays in the work beyond the control of the contractor, such as site conditions, as in variation 1. Management had requested a revised schedule from the contractor that included acceleration of work to meet its contractual completion milestone.

107. Management stated that it should be noted that there had been design issues related to the P10 car park that were beyond the control of the contractor, which had necessitated the issuance of variation 5. This would require additional effort on the part of the contractor, which might have an impact on the amount of delay damages chargeable to the contractor relating to the completion of the P10 car park.

108. With respect to the retaining wall and crane base, management stated that the contractor had originally requested an extension of time of two-and-a-half months. Subsequent to the audit, agreement had been reached on a revised completion date of 13 January 2020 (instead of 29 November 2019).

109. Management acknowledged that further delays might arise related to the implementation of flexible workplace strategies and that this had been factored into the project planning.

110. The Board concludes that the contractual completion date was postponed by more than one month and further postponement is probable with regard to the implementation of flexible workplace strategies. Nevertheless, even with respect to the updated contractual completion date, the work is delayed and needs to be accelerated to meet the contractual completion date and the project schedule.

(b) Renovation work

Implementation strategy for the renovation work

111. As described in section III.K of the fourth progress report of the Secretary-General, management changed the implementation strategy for the renovation work. This decision was made in September 2017 and was based on an intense risk analysis, including consultations with the construction industry. The change entailed an amendment to the contract with the design firm, which was approved on 10 January 2018 by the officer-in-charge of the Office of Central Support Services after recommendation by the Headquarters Committee on Contracts (see para. 123 below).

112. The new implementation strategy is to bring the design for all renovation work (buildings A, B1, B2, C, D, S and E) to the level of full technical design before the tendering of the work itself. This will allow for tendering the work in a more traditional design-bid-build mode, as the design will be mostly complete and no substantial design work will have to be provided by the contractor. In comparison, the initial strategy was to engage a general contractor to perform not only the renovation work itself but also the technical design for buildings B2, C, D, S and E (design and build approach). Only the technical design for buildings A and B1 should have been provided to the general contractor. Another element of the new implementation strategy is to tender two different renovation contracts (one for the original 1930s buildings, another for the 1970s building E) instead of one comprehensive contract.

113. The Secretary-General argued that the change in the implementation strategy would be of great benefit as a means of mitigating risks to the project, providing more competitive bids and reducing the probability of cost overruns and contractor claims. The Secretary-General further explained that, owing to the refined implementation strategy, renovation work was shown as starting later than originally foreseen (see A/72/521, fig. 2). Nevertheless, that work remained within the overall programme as the further design work was completed before tendering the work rather than after the tendering of the work as originally envisaged.

114. In principle, the Board considers a design-bid-build approach to the renovation of historic buildings reasonable. Until the completion of the technical design based on a sound inspection of the whole structure of a historic building, the level of uncertainty about the exact scope of the work may be very high. This may make it difficult for a construction firm to seriously calculate a bid price. Consequently, this might lead to either significant risk premiums in the contract price or a contract price that does not cover the costs, which entails a high risk of aggressive claim management by the contractor. Therefore, with regard to the renovation of historic buildings, a design-bid-build approach may be appropriate to increase competition and to reduce the probability of both significant risk premiums in the contract price and contractor claims. Moreover, this approach has the advantage of retaining full control of the design and quality standards.[5]

115. It cannot be ruled out, however, that the change in the implementation strategy will have an impact on the overall schedule. This is because the decision on the change has been taken rather late. Therefore, the schedule for the technical design for

[5] See also United Nations Board of Auditors, "Lessons from the United Nations Capital Master Plan" (December 2014), theme 5.

buildings B2, C, D and S, which has to be prepared before the tendering of the renovation work contract as a consequence of the new strategy, is very tight (see paras. 121–133 below for details). A further consequence of this tight schedule is that the project team had no realistic option but to offer the commission for the technical design to the design firm that had already prepared the previous design.

Overall schedule for the renovation work

116. Milestones for work (without design) as shown in the strategic heritage plan team's project schedules as at December 2016, July 2017 and January 2018, and in the fourth progress report of October 2017, are set out in table 1 (see also annex III for comparison of the project schedules).

Table 1
Milestones for the work on the historic buildings and building E

Activity	*Project schedule of December 2016*	*Project schedule of July 2017*	*Fourth progress report (October 2017)*	*Project schedule of January 2018*
Start date of work for buildings A, B, C, D and S (without design)	July 2018	August 2018	December 2018	May 2019
Start date of work for building E (without design)	October 2021	September 2021	September 2021	October 2021
Overall completion date	July 2023	September 2023	December 2023	December 2023

Sources: Project schedules of the strategic heritage plan team and fourth annual progress report of the Secretary-General (A/72/521, fig. 2).

117. Accordingly, in January 2018, the envisaged start date of the renovation work for the 1930s historic buildings was about nine months later than the date shown in the schedule of December 2016. The envisaged overall completion date has been postponed by about five months, which would be just before the latest possible completion date affirmed by the General Assembly.

118. One reason for the postponed start date is that, owing to the new implementation strategy, the technical design work for buildings B2, C, D and S has to be completed before the tendering of renovation work. For that reason and since there shall be one comprehensive tender that includes all historic 1930s buildings, the start of work on buildings A and B1, the technical design of which has been completed already, depends on the completion of technical design work for buildings B2, C, D and S. According to the former implementation strategy, in contrast, work on buildings A and B1 should be performed in parallel to the development of the technical design for B2, C, D and S, which should be provided by the construction work contractor. As a result of the technical design of buildings B2, C, D and S having become an additional condition for the start of work on buildings A and B1, the start date of the renovation work has been postponed.

119. The Board noted that the overall project schedule had become significantly tighter since 2016, especially because there was no longer any buffer time between the completion date of construction work envisaged by the strategic heritage plan team and the latest completion date according to the time schedule affirmed by the General Assembly. Hence, further delays might jeopardize the timely completion of the project. The risk of such delays as a result of unexpected constraints could not be ruled out, in particular because the structure of the historic buildings was not yet known in full detail. Delays of the renovation work might also derive from, inter alia, delays,

omissions or errors in the further design work for the renovation (see paras. 121–133 below), issues in the procurement process, the implementation of the flexible workplace strategy (see paras. 208–227 below), conflicts with the conference schedule and business continuity in general and changes in the requirements of stakeholders. Furthermore, delays in the completion of building H (see paras. 89–110 above) might have an impact on the schedule of the renovation work because of the interdependence of the main sections shown above. Accordingly, the risk management firm stated in January 2018 that the pre-risk mitigation confidence level (i.e. the level if no further mitigation action was taken) for completing the strategic heritage plan programme on time as estimated by the strategic heritage plan team was less than 1 per cent, indicating that significant mitigation steps were required to alleviate any potential delays to the process. Indeed, at the P80 confidence level, the risk management firm estimated a pre-mitigation delay of up to one year as at January 2018.

120. With regard to the tight project schedule, the Board sees a need for management to keep up efforts to ensure timely completion of the project without neglecting the quality standards. In this respect, management should review the degree to which steps already taken turned out to be effective or should be enhanced, respectively, and what measures can be adopted additionally (e.g. setting more milestones that are subject to delay damages in future work contracts).

Schedule for further design work for buildings B2, C, D and S

121. As shown above, before September 2017, management had planned to use a design and build construction contract for the renovation portion of the strategic heritage plan project whereby the construction contractor would be responsible for carrying out the technical design for buildings B2, C, D and S. The United Nations Office at Geneva planned to provide the contractor with the technical design for buildings A and B1 only. The development of the technical design for buildings A and B1 by a design firm, assigned by the United Nations Office at Geneva, started in March 2016 and is currently being finalized with a revised completion date of at least six months later than originally planned. Management noted that the timetable for finalizing that work was postponed to align with the timing of the technical design for buildings B2, C, D and S in order to ensure a consistent design tender package.

122. As a consequence of the new implementation strategy of 2017 (see paras. 111–115 above), the United Nations Office at Geneva requested the Headquarters Committee on Contracts to review an amendment to the contract with the design firm to include the technical design for buildings B2, C, D and S for an additional value of about CHF 11 million. The Office informed the Committee that an eight-month period for carrying out the additional technical design services had been agreed with the design firm.

123. In the Headquarters Committee on Contracts meeting of 10 January 2018, the Committee recommended approval of the amendment to the contract with the design firm. The officer-in-charge of the Office of Central Support Services accepted and approved the recommendation of the Committee. When the Board finished its visit to the United Nations Office at Geneva on 9 February 2018, the amendment to the contract with the design firm had not yet been concluded.

124. The United Nations Office at Geneva intends to conclude a single construction contract for the renovation of the 1930s historic building (comprising buildings A, B1, B2, C, D and S). According to the phasing plan of 8 February 2018, a large portion of the work on building A is planned to be executed between July 2019 and February 2020 in order to minimize negative impacts on the large annual conferences of the World Health Organization and the International Labour Organization, which take place in May and June. To meet this construction schedule, it is planned that the

request for proposal will be issued by 3 September 2018 (see procurement schedule of 8 February 2018), since the bidding phase, the evaluation phase, the contract finalization phase and, subsequent to the contract signature, the mobilization phase are expected to last 10 months altogether. The signature of the contract is planned by 3 May 2019.

125. The finalization of technical design and tender documentation is a condition for the request for proposal because those documents are a component of the request. Taking into account that one month is needed for the United Nations Office at Geneva to review the technical design and for the design firm to incorporate the respective comments, there are less than six months left for the development of the technical design for buildings B2, C, D and S to meet the schedule.

126. In the opinion of the Board, the schedule for the technical design and tender documentation for buildings B2, C, D and S (a period of less than six months) is very ambitious. In view of the delays in the design for buildings A and B1 and the fact that the performance period for technical design for buildings B2, C, D and S originally had been estimated to last eight months, the Board sees a high risk of not meeting the tight schedule. Such delays may lead to conflicts between the work on building A and the conference schedule, which may lead to further delays and extra costs.

127. The Board suggested that management consider options to avoid delays in technical design and tender documentation for buildings B2, C, D and S and construction work, especially for building A (e.g. review of separated tendering of work for building A as an option, taking into account interface issues with mechanical, electrical and plumbing work).

128. In its response, management stated that it had already analysed the possibility of launching a separate tender process for building A. Nevertheless, the potential benefits of such a separate tender would be outweighed by the associated delivery risks.

129. Management explained in detail that the timeline had been discussed and reagreed based on past experience and mitigation actions that would ensure a more efficient use of the time available. Additionally, the design firm had hired a company to produce and prepare the documents for technical aspects related to mechanical, electrical and plumbing services. Management stated that the local engineering firm had not been able to carry out the design work effectively in the previous processes.

130. **The Board recommends that management consider fallback options in the event of delays in design for buildings B2, C, D and S and in construction work for building A.**

131. Management emphasized that several options existed for mitigating any delay in the subsequent phases of the process and that the strategic heritage plan team would continue to identify risks and mitigation actions as per the project risk management strategy.

132. While recognizing these positive steps, the Board still considers that the schedule for the technical design and tender documentation for buildings B2, C, D and S is very ambitious. The need for preparation and detailed checking of supporting documentation so that contracts and specifications are clear is essential for a complex project such as the strategic heritage plan project, so that change orders and claims are minimized. The involvement of an additional company to produce and prepare the documents for the technical aspects might be a challenge as that company would have to rapidly familiarize itself with the project and the existing design deliverables to avoid inconsistencies.

133. Since future delays cannot be ruled out, the Board is of the opinion that there is a need for consideration of mitigation and fallback options and that management should therefore continue to take effective mitigating actions during the next stages of the project, including during the procurement stages.

5. Procurement and construction contracts

Overview of recent procurement activities

134. During the reporting period, significant progress was made in the field of procurement activities. The Board would like to highlight the below milestones.

135. Concerning the procurement procedures related to the strategic heritage plan, an agreement with the Office of Central Support Services was reached in 2016 to streamline procedures. Accordingly, a one-step review by the Headquarters Committee on Contracts (without prior review by the local committee on contracts) for contracts that exceed $5 million was established and change orders to the strategic heritage plan contract, up to an individual value of $5 million, can be approved by management following the recommendation of the Local Committee on Contracts only.

136. In the field of consultant services, the contract with the lead design firm was amended in 2016 to include further detailed design work for the renovation of buildings B2, C, D and S, leading to an increase of the not-to-exceed amount by approximately CHF 12 million. In the same year, management engaged a consultancy firm to provide on-call technical support services for, inter alia, space planning and programming (interior design), building heritage and historical preservation, conference congress systems and low voltage systems, and savings and management systems (sustainability). The not-to-exceed amount for this contract is about CHF 10 million. As a result of the change in the implementation strategy for the renovation of the historic buildings and building E (see above), management also planned to include technical design, construction administration and post-completion for buildings B2, C, D and S in the contract with the lead design firm. During the audit in February 2018, the strategic heritage plan team stated that it was close to finalizing an agreement to amend the contract. The additional amount for the amendment related to the above-mentioned deliverables was estimated at about CHF 14 million.

137. Regarding construction work for the new building H, on 28 March 2017, management commissioned a general contractor to execute enabling work on site clearance, dismantling, foundations, retaining structures, waterproofing and excavation of approximately 30,000 m^3. The contract amount was about CHF 2.5 million. The construction contract for building H was awarded on 4 September 2017. The contract value amounts to approximately CHF 101 million.

138. Pursuant to the modified implementation strategy, two different renovation contracts shall be tendered: one for the original 1930s buildings (buildings A, B, C, D and S) and one for the 1970s building E. The envisaged dates for contract signature are May 2019 (buildings A, B, C, D and S) and August 2020 (building E).

139. In respect of contract value and recent developments concerning building H, the Board put an emphasis on auditing the procurement process and contract management for the building H construction contract.

Mandatory subcontractors

140. The tender documents for the construction contract for building H designated one supplier for access control and fire detection equipment and one supplier for video surveillance equipment. In response to a question on this matter by a bidder, management clarified that bidders would need to approach those two companies directly for such work during the bidding stage and that management expected the

companies to be direct subcontractors of the bidders. The reason given by management was security integration and compatibility with the management campus-wide systems of management that were in place, since the two companies already worked at the campus.

141. Management stated that non-disclosure agreements had been concluded with the mandatory subcontractors for access control and fire detection and for video surveillance equipment when they had been commissioned by management. Management further stated that it could not provide the non-disclosure agreements because the solicitations leading to contracts with the mandatory subcontractors were no longer available.

142. The Board noted that the mandatory subcontractors were aware of sensitive information regarding the procurement procedure. Those subcontractors had a complete overview of all seven companies that were preparing bids. Therefore, there was a general risk that, with the help of mandatory subcontractors, bidders could contact one another. The Board noted that a list of all 17 firms that pre-qualified to take part in the tender process had been published on the website anyway. Nevertheless, it was not evident whether all of those firms would prepare and submit bids.

143. The Board considers that all reasonable measures should be taken so that sensitive information on the procurement procedure is kept confidential by the designated subcontractors. As the Board was not provided with non-disclosure agreements with the mandatory subcontractors, the Board cannot assess to what extent they were appropriate with regard to mitigating the above-mentioned risks. Nevertheless, the Board doubts that the alleged non-disclosure agreements took into account the specific risks connected to the procurement of building H, as they had been concluded for other reasons.

144. **With regard to upcoming procurement procedures, the Board recommends that management review whether it is inevitable that all bidders will need to contact a designated subcontractor during the bidding stage.**

145. **The Board further recommends that management ensure that sensitive information on the procurement procedure is kept confidential by designated subcontractors, e.g. by concluding non-disclosure agreements that explicitly cover information connected to the procurement process.**

146. Management stated that it had reviewed the issue and had determined that, in instances in which a vendor was providing specific services or specific goods to management that must be retained to ensure uniformity and compatibility with those services and goods, there was no other alternative, and it was thus inevitable that bidders would need to contact a designated subcontractor.

147. Management further stated that it agreed with the recommendation on measures to make bidders keep sensitive information confidential and would ensure implementation as part of future strategic heritage plan solicitations in instances in which the use of named suppliers was required.

Time limitation period for defects

148. Pursuant to the conditions of the construction contract for building H, the employer's right to bring a claim against the contractor for defect shall be limited to five years from the substantial completion of the whole of the work. In the event that the contractor has intentionally hidden such defect, the time limitation period is 10 years.

149. The specifications of the contract require specific warranty periods for some parts of the building. For example, the specifications state that "all façades shall be covered guaranteed for a period of ten (10) years against defective materials or workmanship. The Contractor shall repair any defect or replace any faulty item, the moment they occur, during the guarantee period."

150. The Board is of the opinion that, in order to avoid any risk of confusion, the conditions of contract on time limitation periods should indicate that further specific warranty periods exist apart from the general time limitation period and the specific time limitation for intentionally hidden defects.

151. **The Board recommends that, with regard to the upcoming construction contracts for the renovation, management review whether the conditions of contract on time limitation periods should indicate that further specific warranty periods exist apart from the time limitation period for intentionally hidden defects.**

152. Management concurred with the recommendation.

Contract conditions

153. The tender documents for building H comprised a comprehensive draft contract for construction services. The draft contract was prepared by the strategic heritage plan team and included "conditions of contract" on the basis of the construction industry standard contained in the Red Book of the International Federation of Consulting Engineers.

154. After completion of the contract design phase, the conditions of contract deviated from the conditions of the Red Book in many regards. For example, the conditions of contract stipulated full risk allocation to the contractor concerning:

(a) Accuracy, sufficiency and completeness of quantities in the bill of quantities, except provisional quantities;

(b) Accuracy, sufficiency and completeness of site data;

(c) Unforeseeable difficulties or costs;

(d) Changes in cost;

(e) Changes in law.

155. Concerning proper performance, the conditions of contract stipulated the contractor's obligation to provide security instruments as follows:

(a) Bank guarantee for performance of 10 per cent of total contract value;

(b) Retention money of up to 5 per cent of contract price;

(c) Parent company guarantee.

156. Pursuant to the contract conditions, the commencement of work required notification by the employer, recording that certain conditions had been fulfilled, such as providing the bank guarantee for performance and the parent company guarantee.

157. The bidders were requested to indicate whether they accepted the draft contract. The acceptance of the draft contract was evaluated within the commercial evaluation of the proposals. The evaluation of acceptance or non-acceptance of the draft contract had a fixed percentage of total weight whereby bidders obtained zero points for any remarks apart from merely grammatical comments on the conditions of contract. The exact score allotted to the acceptance or non-acceptance of the draft contract was not revealed to the firms.

158. During the bidding phase, firms asked questions and made comments on the tender documents and the procurement procedure. Several of those 439 questions were related to the content of the contract conditions, especially the risk allocation and security instruments, and the evaluation of non-acceptance of the conditions. Four questions dealt with the issue of whether it was possible to replace the retention money with a retention bond. Several comments by firms dealt with the deviations from the Red Book of the International Federation of Consulting Engineers. A firm noted that it had identified numerous deviations which were aimed at tipping the balance in favour of the employer and overturning the risk allocation under the Red Book, which was recognized as "fair" in the international contracting scene. The firm held out the prospect that changes in certain contract conditions would enable the firm to provide the United Nations Office at Geneva with a more competitive offer.

159. By the closing date of the request for proposal, the United Nations Office at Geneva had received seven proposals, four of which received a passing score in the technical evaluation. Following the completion of the commercial evaluation, and based on the results of the combined evaluation of the commercial and technical scores, the United Nations Office at Geneva awarded the contract to a bidder whose proposal had ranked third after the technical evaluation. This proposal received the highest overall score because it had the lowest price in combination with the fact that it had accepted the unqualified contract conditions. By contrast, the proposal with the highest score in the technical evaluation requested the replacement of all terms and conditions of the United Nations draft contract concerning (a) the contractor's design responsibility and (b) construction work with the International Federation of Consulting Engineers plant and design-build contract and the construction contract, respectively.

160. After being awarded the contract on 4 September 2017, the contractor stated that it could not provide the security instruments for performance in the form stipulated in the contract and the schedules for technical and legal restrictions. Hence, the United Nations Office at Geneva initially refused to issue the commencement of work notification.

161. After discussions and a review by the Office of Legal Affairs, the United Nations Office at Geneva and the contractor agreed upon texts for a bank guarantee for performance and a parent company guarantee that differed from the wording given in the respective annex to the contract. The parties concluded a formal amendment (amendment no. 1) to the contract on this matter on 25 October 2017. By a memorandum of 2 November 2017, the United Nations Office at Geneva informed the Office of Central Support Services about the amendment and stated that the modifications were reasonable and not of a substantive nature. After having received the respective securities, the United Nations Office at Geneva issued the commencement of work notification on 27 October 2017.

162. In the Board's opinion, both the bidders' comments on the contract conditions and the issues related to the fulfilment of the conditions for the commencement of work indicate that the contract conditions should be reviewed with regard to future construction contracts.

163. The Board noted that the risk allocation to the contractor deviated in many ways from the risk allocation given in the industry standard Red Book of the International Federation of Consulting Engineers, which was more balanced. The Board also noted that all types of security instruments for performance (bank guarantee for performance, parent company guarantee and retention money) were requested, when normally only one such instrument was requested. The Board further noted that the fulfilment of some contract conditions that were assessed to be not substantive in hindsight had caused serious problems during the performance of the contract.

164. The Board acknowledges the intent of the contract conditions to ensure proper performance by the contractor and to avoid extra costs as best as possible. Nevertheless, some contract conditions can have adverse impacts such as limitation of competition and higher prices. Moreover, in some cases rights and claims may be of limited practical value because their enforcement might be connected to considerable disadvantages (for example, delays). Therefore, when determining contract conditions for renovation work contracts, potential benefits and potential adverse impacts and experiences from the construction contract for building H should be considered.

165. Among other things, it should be taken into consideration whether a parent company guarantee in addition to a bank guarantee for performance is needed in any event. Furthermore, management should consider stipulating that retention money can be replaced by a retention bond on first demand.

166. Regarding the evaluation of bids, the experiences from building H procurement underline that the impacts of acceptance and non-acceptance of substantial contract clauses have to be appropriately reflected in the evaluation methodology and criteria. The Board has concerns as to whether the scoring that was applied to the building H procurement is flexible enough in this regard. The scoring for acceptance or non-acceptance had a rather low percentage of total weight and did not differentiate between minor and major changes. For this reason, on the one hand, the chances of a bidder that rejected the contract clauses winning the tender to a large extent were still too good (see A/72/5 (Vol. I) and A/72/5 (Vol. I)/Corr.1, chap. II, paras. 394 to 399). On the other hand, minor changes in the contract clauses were penalized too severely.

167. **The Board recommends that, with regard to the solicitation of renovation work, management review the conditions of contract, taking into account the experiences from the solicitation of building H work and contract implementation.**

168. **The Board further recommends that management consider whether, if the conditions of contract shall be subject to negotiation at all, the scoring of acceptance of the conditions of contract should be more flexible and differentiate between minor and major modifications requested by bidders.**

169. Management indicated that it noted the concerns regarding deviating from the form of contract contained in the Red Book of the International Federation of Consulting Engineers. While that form of contract might be widely used in Europe, that model did not comply with the status and privileges and immunities of the Organization, was not consistent with the Financial Regulations and Rules of the United Nations and did not fully protect the interests of the Organization. In addition, several material provisions of the form were incompatible with the policies of the Organization as reflected in the Financial Regulations and Rules of the United Nations, with the United Nations General Conditions of Contract and with other terms generally agreed upon between the United Nations and its contractors in commercial agreements, including, in particular, in construction contracts. With the assistance of the Office of Legal Affairs, the terms of the form contract of the International Federation of Consulting Engineers had been adjusted to make it compatible with the Organization's status and policies, including those with respect to dispute resolution, indemnification and contractor liability for its acts and omissions. The extensiveness of the adjustments undoubtedly had changed the risk allocation under the construction contract to be more protective of the Organization than if the United Nations had executed a contract strictly based upon the standard form contained in the Red Book.

170. Management stated that, nevertheless, the United Nations Office at Geneva, in consultation with the Office of Legal Affairs, would review the conditions of contract,

taking into account experiences from the relevant work solicitation and contract implementation.

171. Management announced that, furthermore, the United Nations Office at Geneva would consider a scoring system that was more flexible and differentiate between minor and major modifications that might be requested by bidders.

Process of change orders

172. Before the conclusion of a contract regarding the strategic heritage plan or an amendment to an existing contract, either the Assistant Secretary-General for the Office of Central Support Services or the Director of Administration for management, depending on the estimated value, approves a not-to-exceed amount. The approval is based on a recommendation by the Headquarters Committee on Contracts or the Local Committee on Contracts, respectively.

173. If an envisaged change order is likely to exceed the not-to-exceed amount or is outside the scope of the contract, the strategic heritage plan team has to initiate the standard United Nations procurement procedures with the Purchase and Transportation Section.

174. The procedures for change orders within the not-to-exceed amount and within the scope of the strategic heritage plan contract in question are laid down in the section of the programme manual on "change management".

175. The approved not-to-exceed amount for the construction of the new building H was calculated on the basis of the contract total amount plus a significant additional amount for flexible workplace strategies and another amount for construction contingency.

176. The Board reviewed the change order procedures as described in the draft programme manual as at 15 September 2017. Hence, the Board recommended that several inconsistencies and ambiguities in the programme manual should be eliminated in order to avoid delays and confusion regarding the procedures and responsibilities with regard to change orders.

177. The Board further suggested that change order procedures should put more emphasis on the involvement of the contractor in the assessment of an envisaged change to ensure that all relevant facts for decision-making were available and potential conflicts with the contractor could be identified at an early stage.

178. The Board indicated that, pursuant to the programme manual, change orders should be reviewed by a change order review committee, which had not yet been established. The Board recommended that terms of reference for such a committee should be finalized and that the committee should be established soon.

179. Moreover, the Board suggested that, in any case, change management procedures and the related contract terms on variations and price adjustments should be reviewed in the light of experience gained during their application.

180. Management accepted all of the above-mentioned suggestions. Subsequently, Management has taken steps to eliminate ambiguities and inconsistencies in the description of the responsibilities and procedures in the programme manual, to clarify the role of the contractor in the change order process and to establish the change order review committee and its terms of reference.

181. The Board further highlighted that a part of the not-to-exceed amount for the new building H comprised an amount for introducing flexible workplace requirements. The Board suggested that management establish a mechanism to ensure

that such allowances with specified purposes within a not-to-exceed amount were not used for other purposes without involving the designated procurement staff.

182. Management stated that, owing to the level and importance of the amount for flexible working space for building H, it expected to report the outcome of the process to the Assistant Secretary-General for the Office of Central Support Services, within whose authority it rested to determine whether to consult the Headquarters Committee on Contracts and/or if the Assistant Secretary-General so wished, to change the overall not-to-exceed amount of the contract as a result.

183. The Board noted Management's announcement that it would report the implementation of flexible working space in the building H work contract to the Assistant Secretary-General for Central Support Services. The Board deems it equally important to involve the Assistant Secretary-General if the amount for flexible working space shall be used, wholly or partially, for other purposes. Otherwise, by only applying the change order procedures laid down in the programme manual, the designated procedures for changing the not-to-exceed amount would not be respected.

184. **The Board recommends that management ensure that specified allowances within a not-to-exceed amount for a contract not be used for other purposes without involving the designated procurement staff.**

6. Evaluation, deliverables and performance of consultants

185. Pursuant to paragraph 3.2 of ST/AI/2013/4, the functions of consultants and the outputs to be delivered shall be measurable, attainable, results-based and time-bound. Pursuant to paragraph 3.3 (b) of ST/AI/2013/4, consultants and individual contractors may be engaged only when the required services cannot be met from within the current staff resources owing to a lack of specialized knowledge, expertise or capacity.

186. According to an Excel sheet provided by the strategic heritage plan team, the expenditure for consultancy services for the project added up to more than CHF 61 million as at 31 December 2017 (for the period 2014–2017). The design fees of the main architectural firm formed the largest part of this expenditure. According to the fourth annual progress report (A/72/521), the proposed overall cost estimation for consultancy services amounted to CHF 121 million.

187. In 2017, the project team was supported by up to 20 experts who were under contract as external consultants, either working for consultancy firms [6] or as individual consultants (in two cases).[7]

188. The Board reviewed a sample of 10 contracts with consultants other than the main architectural firm for expenditure of approximately CHF 11 million.

189. The functions of the consultants were not specified as results-oriented in several contracts,[8] nor did the contracts comprise fixed milestones. The aim of these contracts was more to stipulate the availability and presence of certain experts rather than clear deliverables with timelines. These contracts were based on either daily or monthly rates or lump sums. The daily rates range from CHF 368 to CHF 972 for comparable functions.

190. The consultants provide technical support to the strategic heritage plan team in several fields, such as heritage preservation, sustainability and project management.

[6] Contract 2016/4700009258.

[7] Contracts 17/2500102775 and 2016/2500065946.

[8] For instance, contracts 2016/4700009258, 2016/2500088886, 2016/2500065946.

According to the contracts, the consultancy expert services are dedicated to tasks such as:

(a) Reviewing documents of other consultants (e.g. reviewing consultant proposals, drawing specifications and submissions related to space planning and programmes);

(b) Reviewing tender packages;

(c) Performing site surveys, reviewing existing information and systems and advising how to improve them;

(d) Researching, designing, reporting and inventorying (e.g. of existing artworks and heritage furniture);

(e) Organizing and scheduling meetings within the United Nations Office at Geneva, for example, with end user groups;

(f) Participating in design, project management and construction meetings.

191. One contract stipulates a monthly rate for 22 working days in Geneva of CHF 19,880 for each expert. The contractor has to deliver monthly reports by management and weekly reports by the experts on their daily performance. The Board reviewed the weekly reports and noted that neither the daily working time nor whether the experts performed their duty on or off-site was stated in the weekly reports. Additionally, in some cases[9] the weekly reports did not include any information on the deliverables at all.

192. Under the terms of two contracts, the consultants were not obliged to provide information on their performance.[10]

193. In the Board's opinion, the performance of the consultants should have been measured by milestones and deliverables.

194. The Board acknowledges that the staffing table of the project team is limited. In that regard, the Board concedes that the strategic heritage plan is in need of on-call services for technical or administrative tasks. Nevertheless, all performance can be stipulated by targets, timelines and fixed deliverables.

195. Management stipulated contracts for consultancy in different currencies.[11] Five contracts were established in United States dollars, euros or pounds sterling. Some of the contracts have an overall duration of several years, up to 10 years.[12] The budget of the strategic heritage plan is calculated and allocated in Swiss francs. Management accepted the potential currency risk regarding these long-term contracts.

196. In 2016, the Procurement Division contracted a consultant for services relating to a flexible workplace study and related consulting services regarding the strategic heritage plan in Geneva. The contracted consultant was already active in implementing flexible workplace strategies at Headquarters in New York. Therefore, the existing contract has been expanded for the strategic heritage plan (amendment no. 3 to the already existing contract no. PD/C0093/14).

197. According to annex C-3 of amendment no. 3, the contractor was entitled to reimbursement from the United Nations for travel expenses, including daily subsistence allowance, according to the United Nations rules without fixed

[9] Weekly reports of space planner or move manager.

[10] Contract 2016/2500065946, 2016/2500088886.

[11] For instance, contracts PD/C0093/14, 62/2014, 24/2013, 25/2012 and 17/2500102775.

[12] Contracts 2016/4700009258 and 24/2013.

requirements. The cost for international and national transportation and terminal expenses has been capped for economy class at the least expensive airfare.

198. Through February 2018, the strategic heritage plan paid $810,565 for services regarding flexible workplace, including $52,925 for travel. Of this amount, the strategic heritage plan paid $29,499 for daily subsistence allowance and $6,672 for the following return flights from New York to London or Geneva: one return ticket from New York to London for $2,517 on 4 December 2016, two return tickets from New York to London for $999 each on 5 December 2016 and one return ticket from New York to Geneva for $2,157 on 16 November 2016.

199. The refundable value for the economy ticket from New York to Geneva for $2,157 and from New York to London for $2,517 appear inappropriately high for tickets in economy class at the least expensive airfare, particularly compared with the two billed return flights from New York to London booked during the same period.

200. **The Board recommends that management conclude future consultancy contracts in a results-based and time-bound manner and with fixed deliverables. For evaluating the performance of consultants, milestones should be established. Existing long-term contracts should be updated accordingly.**

201. Management did not agree with the recommendation since commercial agreements concluded for the provision of services to the strategic heritage plan were results-oriented contracts, which, through the relevant task orders, already included fixed deliverables at an agreed price. Management further stated that, as with all procurement contracts, all consultancy firms were evaluated for their performance under the task order as part of both the annual performance review and the contract renewal process.

202. The Board maintains that some contracts were not results-based and did not include fixed deliverables. Furthermore, the billing of performed services has often been calculated based only on the monthly presence of the consultants and daily fees, without any explanations regarding the progress or fixed deliverables that would allow for effective performance-based monitoring and correct payments (according the actual service progress and agreed timelines).

203. **The Board recommends that management mitigate the risk of currency exchange by concluding contracts only in Swiss francs.**

204. Management noted the risk associated with contracts in currencies other than Swiss francs and highlighted that the acceptance of such risk had so far been beneficial to the project. Furthermore, management stated that changing the currency of the contracts would have commercial implications; some vendors had less ability to manage exchange risk than the United Nations, which already transacted large volumes in multiple currencies, and therefore the increase in the rates that they would charge to accept the currency risk could outweigh the probable value of the risk avoided.

205. The Board holds that the Swiss franc currently might be highly rated against the United States dollar, the euro and the pound sterling. Nevertheless, this could change in the short term and affect the available budget and the cost estimates.

206. **Furthermore, the Board recommends that the cost for travel be revised with regard to contract-based services and limited to the most economical and reasonable airfare.**

207. Management agreed with the intent of the recommendation in so far as the cost for travel of consultants for contract-based services should be limited to the most economical and reasonable airfare. Management also reported that annex C-3 of the contract already stated that the cost of international and national transportation and

terminal expenses would be reimbursed for travel (in economy class) at the least expensive airfare.

7. Flexible workplace strategies

208. The General Assembly acknowledged in its resolution 70/248 A that space optimization was one of the key objectives of the strategic heritage plan, and requested the Secretary-General to apply flexible workplace strategies and to ensure that the application of flexible workplace strategies at the Palais des Nations took into account the physical characteristics and the specific heritage preservation needs, as well as ongoing business transformation initiatives, in a cost-effective manner.[13]

New building H

209. With the implementation of flexible workplace strategies in the new building H, management initially targeted a baseline of 1,400 workspaces in this building, 200 of which would be hot desks in order to meet peak conference demands and service meetings more effectively. Although the planned office levels were significantly condensed, the baseline was not reached. The layout provided 1,215 temporary and permanent workstations, plus 827 seats for meetings or collaboration.

210. In autumn 2016, some staff members of the United Nations Office at Geneva expressed doubt that they would get improved working conditions in the new building, which led to the "Say no to flexible workplace" campaign. Staff were afraid of the changes that "hot desking, co-working and nomad-working" could bring. At the same time, management tasked a consultant with preparing an assessment report on space analysis and business case.

211. The Board was provided with a business case report issued on 24 July 2017 (revision no. 6). As indicated in the executive summary of that report, it was "a comprehensive workplace study to understand challenges and opportunities associated with smart working for all staff at the United Nations Office at Geneva". "Smart working" is meant to be a flexible workplace strategy fully tailored to the requirements and constraints of the United Nations organizations based in the Palais des Nations.

212. The report concluded that it was possible and advisable to implement smart working in the Palais des Nations and the new building. According to the consultants, implementing smart working meant that employees would have increased opportunities to work more dynamically and collaboratively, and enjoy greater freedom to use their environment in a way that maximized collective productivity and satisfaction.

213. Furthermore, the report emphasized that much more shared space for collaboration was needed than had been planned in the new building so far. The report predicted that, by reducing the total number of workstations (with their own desks) from 1,215 to 969, it should be possible to increase the space for collaboration. The survey showed in an example called "Test-fit for level 04" that 276 workstations might generate a smart working capacity for up to 479 users. In comparison, non-smart working produced a capacity of only 411 users, according to the report, although there would be more workstations (352).

214. The Board considers the result of the comparison of the two layouts concerning capacity as not being reliable because it aggregates very small spaces that can be used by a single employee (phone booths) with project rooms that fit up to eight persons. Besides, desk-sharing with a ratio of 1 to 1.1 or 1.25 is included only in the calculation for smart working. In the Board's opinion, desk sharing at a low ratio may also be possible in the non-smart working scenario.

[13] See General Assembly resolution 70/248 A, section X, paras. 13 and 14.

215. The Board further noted that the business case report was based on a net internal area of 19,078 m², which was wrong. The correct net internal area should be 1,088 m² smaller. The consultant conceded that the correct net internal area should be 17,990 m² and corrected the report during the audit visit in September 2017, which led to business case report revision 07 of 27 September 2017.

216. Management stated that the initial target of 1,400 workspaces had to be reviewed and revised to adapt to the grade assignment policies currently in place in the United Nations Office at Geneva. The three entities that had originally been foreseen to relocate to building H represented more P grades than G grades; therefore, the larger space allocated for P grades meant that the 1,400 target could not be achieved. There were considerable margins of improvement in space efficiency when the policy of allocating space dependent on grade was revised.

217. Management underlined that all employees would be able to choose to work at a properly designed and ergonomically appropriate workstation as their main base during a typical working day. In addition, the remaining aggregated spaces, including "very small spaces" (which are only one of several types of additional support spaces), would also be available from which employees could perform specific tasks related to their work activities at different points in the day (such as concentration, collaboration and other social interactions). It was expected that these aggregated spaces would also be used to ensure that the calculated desk-sharing ratios could be relied upon to be achieved. The arrangement that was described in the base scheme as desk sharing at a low ratio would more properly be described as "hot desking", which would be desk sharing, only without the benefits of a smart working environment. This would not address the concerns employees have expressed about the lack of privacy and confidentiality, poor acoustics, lack of concentration and lack of meeting and collaboration space.

218. The contract for the main construction work for the new building H is based mainly on plans and designs issued in December 2016, without considering smart working. The construction work for the new building started at the end of 2017.

219. The Board noted that implementing smart working would lead to changes in the technical design of the architectural interior, drywall installation, the technical ceiling, electrical installation, plumbing and sprinkler systems, information and communications technology and audiovisual facilities, firewalls and smoke protection. According to the analysis of the consultants, these changes may lead to extra costs of up to CHF 7 million.

220. The Board emphasizes that the business case report is not reliable in every aspect and that the project team needs to urgently perform the new technical design for all floors and details in order to agree upon amendments with the general contractor. The Board also considers it problematic that the Office has let the architect plan for more than two years without putting forward the question of whether the layout conforms with the latest working ideas, up-to-date collaboration strategies and staff requirements.

221. Management agreed with the observation that the business case report was not reliable in every respect. Management further stated that it believed that business cases were living documents and that they would be and had already been updated to ensure that the business case remained robust. With regard to communicating with the architect, management believed that it would not have been appropriate to instruct the architect to anticipate the revision to the design until it had formally been accepted by the General Assembly. If the Assembly had rejected the change and management had already instructed the architect to move forward with the change, it would have been very difficult to go back to the original baseline and to keep to the schedule. In addition, management noted that the requirements of staff had been considered

through substantive consultations through departmental focal points and engagement with the staff council.

222. **The Board recommends that management urgently decide on how to implement flexible workplace strategies on all floors of the new building to avoid any further risk of amendments, delays and extra costs for the general contractor.**

223. Management concurred with the recommendation.

Historic buildings of the Palais des Nations

224. The business case report concluded that the implementation of flexible workplace strategies would also be possible in the historic buildings of the Palais des Nations. The consultant developed four different options for level 03 of the Palais des Nations to serve as examples. In the view of the Board, some of these options did not meet the requirements of an outstanding heritage. All of the options required dismantling existing walls, doors and corridors. Major interventions might harm the genius loci of the Palais des Nations. Furthermore, the consultants figured out that the estimated extra costs for implementing flexible workplace strategies might reach CHF 35 million, or even CHF 60 million, depending on the option selected. Funding options for these additional costs were being studied with regard to the need for additional Member State assessments.

225. The Board suggested that management reconsider if flexible workplace strategies could really succeed on all floors of the heritage-protected Palais des Nations.

226. In the meantime, the Advisory Committee on Administrative and Budgetary Questions, in paragraph 37 of its report on the fourth annual progress report of the Secretary-General on the strategic heritage plan (A/72/7/Add.25), recommended against the feasibility study and the subsequent detailed design work for the implementation of flexible workplace strategies in the historic buildings of the Palais des Nations, as well as the funding proposal. In its resolution 72/262 A, the General Assembly requested the Secretary-General to ensure that the application of flexible workplace strategies at the Palais des Nations took into account staff welfare and productivity, the physical characteristics and the specific heritage preservation needs, as well as ongoing business transformation initiatives, in a cost-effective manner.

227. Taking into account the above-mentioned report of the Advisory Committee and the General Assembly resolution, management needs to reconsider the implementation of flexible workplace strategies in the historic buildings. The Board will further monitor the process and results.

8. Building design, construction and maintenance

Outside areas

228. The Board noted that the technical design for the gardens and terraces of the new building provided a plaza located at the main entrance on level 02; two courtyards, including the Mineral Garden on level 02, and the Lush Garden on level 03, with a trapezoidal shape and a partially paved surface. Furthermore, there were five terraces on four different levels providing highly sophisticated greened roof terraces for the staff. All terraces had stainless steel balustrades, irrigation systems and stainless steel construction designed to separate the greening elements. Roughly a fifth of the terraces were paved with trapezoidal elements of Italian granite paving, textured with bespoke satinized stainless steel grilles with extensive greening. Level 05 even had two separate terraces, although level 04 provided many more workstations and level 03 had its own terrace. All exterior sites provided bespoke benches of precast concrete with honed finish or Italian granite. Most of the 57

benches and seats were planned in a trapezoidal shape and provided outside seating capacity for 280 people.

229. The Board maintains that the exterior areas are planned very ambitiously with regard to quality and quantity. Furthermore, the design of the external areas may also have an impact on service and maintenance costs (e.g. for gardening on the roof terraces).

Photovoltaic panels

230. Pursuant to the contract for the construction work for the new building, the contractor is obliged to install 270 m² of photovoltaic panels with a peak power of at least 50 kilowatts. The specification in the contract stipulates a production of at least 36,000 kilowatt-hours per annum. The contract also includes plans showing where and how the panels are to be installed on the highest rooftop of the new permanent building.

231. The Board noted that the alignment of the panels referred to the parapet wall rather than to the geographical orientation. The panels were more oriented towards the east than the south. This would lead to lesser efficiency than if the panels were oriented towards the south, and might have a negative impact on annual production of approximately 5 to 10 per cent.

232. **The Board recommends that management consider an optimized orientation of photovoltaic panels on the top of the new building.**

233. Management agreed with the recommendation and stated that it considered the drawings in the contract specifications as only indicative with regard to the location of the panels and would ensure that the detailed installation plans proposed and submitted by the contractor were optimal.

Cooling and ventilation

234. The project team provided the Board with simulations of the thermal comfort during the summer and winter periods at the Palais des Nations. The aim of the simulations for the summer period was to investigate whether the current situation met the thermal comfort requirements of the standards of the Swiss Society of Engineers and Architects or if mechanical ventilation and a cooling system were necessary. The simulations have considered open-space and hybrid offices, especially offices with a southern exposure and internal heat loads.

235. The result of the simulations for the summer period was that the inside temperature met the requirements without a cooling system and without mechanical ventilation. Nevertheless, management intended to equip the Palais des Nations with a cooling and ventilation system. The fourth annual progress report on the strategic heritage plan also stated that a cooling and ventilation system would be necessary owing to envisaged changes of existing individual offices to a hybrid layout that included closed and open office environments for the implementation of flexible workplace strategies. Furthermore, it was reported that delegates, staff and visitors had increasingly experienced temperatures in the summer months that exceeded comfortable levels.[14]

236. Management expects that the costs to add a mechanical ventilation and a cooling system in all spaces in the Palais des Nations will amount to CHF 26 million.

[14] See A/72/521, para. 26 (f).

237. The Board noted that management had not carried out any simulation of the thermal comfort for the Palais des Nations with regard to the implementation of flexible workplace design.

238. **The Board recommends that management decide on the necessity of mechanical ventilation and cooling systems in the Palais des Nations only on the basis of thermal comfort simulations. These simulations are to be documented.**

239. Management agreed with the recommendation.

Baseline and estimation of energy savings

240. The United Nations Office at Geneva contracted a consulting engineering firm to provide essential information about the current building conditions and the objectives of the strategic heritage plan. In February 2011, the consulting firm issued its conceptual engineering and architectural study report on the strategic heritage plan. That report stressed that one of the most important objectives of the strategic heritage plan was to improve energy efficiency. According to the report, energy consumption could be reduced by up to 25 per cent of the consumption of the existing Palais des Nations.[15]

241. In his 2011 report on the strategic heritage plan, the Secretary-General underlined the importance of updating the building exterior and electromechanical systems to reduce the cost of energy consumption. The actions, or the implementation of the strategic heritage plan, were expected to result in a reduction in the energy consumption at the Palais des Nations of approximately 25 per cent, which would generate savings of $1.7 million per biennium (see A/66/279, para. 11 (c) (iv)). The report of the Secretary-General did not provide energy consumption calculations or the year to which the figures related.

242. In 2013, in his report on the strategic heritage plan (A/68/372), the Secretary-General again stressed the reduction of energy consumption as one of the key objectives of the strategic heritage plan project. The report further stated that the energy costs would decrease the expenses by CHF 16 million over 25 years, taking into account an implementation period for the strategic heritage plan of eight years. Again, the base year to which the energy consumption savings related was not stated.

243. The General Assembly approved the proposed scope, schedule and estimated cost of the strategic heritage plan in 2015. In the meantime, energy-saving measures at the Palais des Nations had been concluded, funded by a donation of CHF 50 million. The work, which was concluded in 2014, included repairs to parts of the roof and windows, optimization of lighting, installation of solar panels and replacement of certain ventilation units. Pursuant to the report of the Secretary-General on the strategic heritage plan of the United Nations Office at Geneva (A/68/372), the donation from the host country has contributed to a reduction of the scope of the strategic heritage plan and reduced the overall cost of the renovation project.

244. In his fourth annual progress report on the strategic heritage plan, issued in 2017, the Secretary-General stressed that one of the core objectives of the plan was to lower the energy consumption of the Palais des Nations by at least 25 per cent as compared with the 2010 baseline.

245. The Facilities Management Section of the United Nations Office at Geneva provided the Board with detailed information on actual consumption of electricity and heating energy by the Palais des Nations for the period 2006–2017.

[15] Buildings A, B, C, D, E and S.

246. The strategic heritage plan project team prepares a quarterly memo related to energy consumption. The memo from October 2017 describes the current and expected consumption of electricity and heating energy, along with costs for the existing Palais des Nations[15] based on 2010 and 2015.

247. The Board reviewed all data provided by FMS and the strategic heritage plan project team and noted that the data differed. Management stated that data provided by the project team were adjusted for normalization of consumption for variation in weather between years. Nevertheless, the project team did not provide any calculations regarding these adjustments or expected energy consumption, as requested by the Board.

248. The following table shows the different figures provided to the Board:

Table 2
Figures on energy cost and energy consumption

	Facilities Management Section[a]	*Strategic heritage plan project team Energy use: update of the third quarter of 2017 (6 October 2017)*
Energy costs for 2010	CHF 2.8 million[b] (energy bills)	CHF 3.4 million[c] (calculation not available)
Energy costs for 2015	CHF 2.2 million[d] (energy bills)	CHF 3.0 million[e] (calculation not available)
Energy consumption 2000–2016	55,809 MWh	
Energy consumption 2010–2015		121,141 MWh[f]
Decrease in energy use 2010–2015		5,989 MWh[f]
Decrease in energy use 2000–2016	6,588 MWh	

Source: United Nations Office at Geneva.

[a] Email of 18 October 2017.

[b] Electricity (CHF 1.89 million) + heating (CHF 0.905 million) = CHF 2.795 million (Palais des Nations).

[c] Electricity CHF 2.120 million + heating CHF 0.919 million + lake water for cooling = CHF 0.330 million = CHF3.369 million (Palais des Nations and Palais Wilson)

[d] Electricity (CHF 1.390 million) + heating (CHF 0.839 million) = CHF 2.2 million (Palais des Nations).

[e] Electricity CHF 1.608 million + heating CHF 1.014 million + lake water for cooling = CHF 0.392 million = CHF 3.014 million (Palais des Nations and Palais Wilson)

[f] Primary energy.

249. The strategic heritage project team further provided the Board with an energy savings report of February 2018. In that report, the project team explained, inter alia, that the examination of the data found in various previous reports and the energy bills allowed the determination that 2010 would be considered as the reference year for the 25 per cent energy savings that should be obtained after the completion of the whole project.

250. Furthermore, the Board noted that the energy savings report specified that the reduction in energy consumption included the Palais Wilson in its baseline. That meant that the 25 per cent in energy savings would be measured against the baseline energy consumption of the Palais des Nations and the Palais Wilson.

251. The Board reviewed all data provided and noted that the data contained in the different reports on the strategic heritage plan and the data received from FMS and the project team differed significantly. Therefore, the Board is of the opinion that the data are not a reliable basis for enabling the project team to predict possible energy savings and cost savings.

252. The Board considers that the baseline for the energy consumption of 25 per cent is unclear and needs to be determined, especially since energy-saving measures have already been completed and were funded outside of the scope of the strategic heritage plan.

253. Furthermore, there is no justification as to why the project team decided to include the Palais Wilson in the baseline for energy reduction. This subject was not considered in any previous progress reports on the strategic heritage plan. In the Board's view, the energy consumption of the Palais des Nations should be clearly defined as the baseline for energy reduction.

254. Management believes that the energy savings report provides a sound basis and calculation method for tracking the energy savings in a structured manner. Management stated that the document would be constantly evolving based on the emerging designs, phasing strategy and execution.

255. Nevertheless, management confirmed that the Board's observation had correctly identified that comparing energy consumption data and costs could lead to confusion. Management would consider the inclusion of explanations in the future iterations of the energy savings report, along with the provision of a table to improve clarity.

256. Management stated that the energy baseline of 2010 and the 25 per cent consumption reduction objective were clear and that management aimed to achieve that objective by the completion of the renovation work.

257. Management also stated that, when compiling the energy savings report, it had been decided to include the energy costs of the Motta building and the Palais Wilson, as the approximately 700 staff members who worked in them would ultimately be relocated to the Palais, increasing the number of staff and consequently the energy consumption. Nevertheless, management would seek to create a new baseline that excluded the energy costs of the Motta building and the Palais Wilson but, in doing so, it would make justified and rational adjustments to account for the additional plug loads and increased general usage of services (e.g. the cafeteria, Press Bar) owing to the increased number of staff on the campus.

258. The Board emphasizes that the reduction of energy consumption is one of the key objectives of the strategic heritage plan project. Therefore, it is crucial to set the baseline after the work funded by the donation of the host country was concluded since the donation has already contributed to a reduction of the scope of the strategic heritage plan. Subsequently, this will lead not only to a new energy baseline but also to a new and lower objective for the energy savings still to be achieved through the strategic heritage plan project.

259. **The Board recommends that management consider the beginning of the implementation of the strategic heritage plan as the baseline for the reduction of energy consumption. Management should thereby take into account the energy savings already achieved through other energy saving measures outside of the scope of the strategic heritage plan since the benchmark of 25 per cent has been stipulated, and define a clear, adapted benchmark as the objective for the energy savings envisaged with the implementation of the strategic heritage plan.**

260. Management pointed out that the 25 per cent figure had always been in comparison with the situation before the replacement of the windows by means of the Swiss donation, since it had been planned that the main savings available would come from replacing the windows. Therefore, the target energy reduction would also need to be reset, by deducting the savings contributed by the window replacement.

261. **Furthermore, the Board recommends that management base the calculation of energy savings on sound and reliable data on the energy**

consumption at the Palais des Nations before the implementation of the strategic heritage plan started, namely, before the start of the construction work on the new building.

262. **Furthermore, the Board recommends that management consider solely the energy consumption at the Palais des Nations for the baseline for the reduction of energy consumption.**

263. Management stated that it remained of the view that the baseline should not be solely based on the Palais des Nations but should also include Palais Wilson.

Maintenance

264. The Facilities Management Section,[16] as one part of the United Nations Office at Geneva, is responsible for the safe and reliable operation, maintenance, modification, improvement, repairs to and replacements of the campus of the Palais des Nations and associated technical facilities, machinery, equipment and other furnishings installed.

265. Regarding maintenance, the strategic heritage plan project team is working in close collaboration with the Facilities Management Section to make sure that the United Nations Office at Geneva has the necessary technical information regarding operation and maintenance requirements for the renovated and new buildings of the Palais on time and before completion of the strategic heritage plan.

266. The construction work of the strategic heritage plan started with the new building (building H). After the finalization of building H, the renovation of the Palais des Nations will start. The project team will then use parts of building H as swing space during the renovation of the Palais des Nations.[15] The renovation and dismantling of building E will be the last step of the implementation of the strategic heritage plan.

267. The renovation of the Palais is taking place in single sections. Nevertheless, all technical building systems in single sections, such as heating, sanitary, lighting and other electrical systems, are interconnected. The project team will hand over completed sections to the Facilities Management Section while the other sections are still under construction. The maintenance, operation and business continuity of the completed sections would then be the responsibility of the Facilities Management Section.

268. The Board noted that the project team did not have a maintenance strategy to avoid duplication of effort and lack of clarity for the period during which sections would have already been completed and other sections would still be under construction. In the event of a breakdown of the technical building system in a complete section, it was not clear who would be responsible for what.

269. The Board appreciates the collaboration between the project team and the Facilities Management Section regarding technical aspects of the strategic heritage plan. Nevertheless, the Board sees a significant challenge in completing the renovation of the existing buildings in single sections.

270. The Board noted that the project team had not calculated the expected operating and maintenance costs. Knowledge of those costs was crucial for considerations regarding a global strategy for adequate funding of maintenance and operational costs in the future.

[16] The Buildings and Engineering Section of the Office has recently been renamed the Facilities Management Section.

271. The Board recommends that the strategic heritage plan project team develop a sound and clear maintenance and operational strategy for the period during which sections of the Palais des Nations will have already been renovated while other connected sections will still be under construction. The experience of the Facilities Management Section should be considered in the development of this strategy.

272. Furthermore, the Board recommends that the strategic heritage project team calculate the expected maintenance and operational costs in close cooperation with the Facilities Management Section as a basis for consideration of funding strategies. Availability of adequate funding for maintenance and operation during and after the implementation of such projects as the strategic heritage plan is crucial for avoiding the need for such programmes of work in the future.

273. Management agreed and stated that it would continue to define and develop, together with the Facilities Management Section, a sound and clear maintenance and operational strategy for the period during which sections of the Palais des Nations were being renovated. Management further stated that several rooms with critical equipment that would be under renovation across more than one "section" of work would need to be clearly documented in order to define the roles and responsibilities of the project team, contractor(s) and the Facilities Management Section during the renovation work. Management also agreed that expected maintenance and operational costs should be calculated.

9. Sustainability

274. Buildings have extensive direct and indirect impacts on the environment. During their construction, occupancy, renovation, repurposing and demolition, buildings use energy, water and raw materials, generate waste and emit potentially harmful atmospheric emissions. These facts have prompted the creation of green building standards, certifications and rating systems aimed at mitigating the impact of buildings on the natural environment through sustainable design.

275. Sustainable green certifications for rating new and existing buildings, construction, operations and maintenance have broader criteria and are not focused only on energy consumption. These certifications are based on a point system, which means that the building earns points when something is done towards the improvement in these categories. The Leadership in Energy and Environmental Design (LEED) rating system is based on accepted energy and environmental principles and strikes a balance between known established practices and emerging concepts. LEED is a programme of the United States Green Building Council, a non-profit organization that launched its first green building rating system in 1998. Credits may be earned in five environmental and two additional categories. LEED also emphasizes an analysis of cost over the life cycle so that the client has the option to make informed choices when opting for green technologies, which may have an initial incremental cost with acceptable payback periods.

276. In March 2016, the design firm of the strategic heritage plan project stated in its architectural and engineering report and in its specifications for the new building that the goal was to obtain LEED gold certification.

277. In August and September 2016, management published requests for expressions of interest for the work on the new building. According to these published requests, construction services were required to build a modern building with environmental standards and achieve the LEED green certification. The contractor would need to have experiences in LEED or similar green building certification systems. Additionally, the contractor would need to provide all testing and commissioning,

including enhanced commissioning as required by LEED, in order to be able to achieve the gold level of LEED certification, or its equivalent.

278. Management specified in February 2017 in its request for proposals for the new building that the contractor should perform the work with the objective of fulfilling the LEED prerequisites and earning credits for the project to obtain LEED gold certification. In accordance with the LEED certification plan, the contractor should be responsible for achieving and documenting all construction credits via the LEED online portal.

279. During the bid process, management responded to different questions from the bidder. In its responses, management stated that the intention was to reach a level of performance equivalent to the LEED gold level.

280. During the audit, the project team stated that it would not privilege the LEED certification system and the United States Green Building Council. Therefore, a certification would not be requested.

281. The Board noted that using a rating system provided architects, designers and the project owner with a metric to verify the relative sustainability of their projects. Targeting a level of sustainability using an established rating system could help to ensure that initial goals were maintained through construction completion. When a project progressed, budget, schedule and other constraints could hamper the completion of a project as originally intended. When attaining a level of certification was not an agreed priority, sustainable attributes were likely to fall by the wayside.

282. **The Board recommends that management enhance its efforts to mitigate the impact of its buildings on the natural environment through sustainable design and ensure that the contractor for the new building performs its work with the objective of fulfilling all environmental categories from the LEED green building certification systems, as stipulated in the contract.**

283. Management stated that it had already complied with the recommendation and that the sustainability design had been under the supervision of professionals accredited by LEED. Additionally, the project team had developed a dedicated LEED credit-tracking system to allow the identification and tracking of activities related to sustainability and energy savings. The contractor could prove compliance with this standard through the submission of all of the relevant documents, which were assessed and accepted by the team.

284. While recognizing the steps taken by management, the Board emphasizes the need to monitor compliance with LEED during the entire construction work process.

10. Cost and cost estimates for contractual consultancy service

285. The estimated cost for consultancy services (including design services), as reported by the Secretary-General, increased from CHF 106 million in September 2013 (see A/68/372) to CHF 121.1 million in October 2017 (see A/72/521), excluding contingencies and escalation.

286. The estimated cost for construction, refurbishment and associated costs increased from CHF 496 million in September 2013 (see A/68/372) to CHF 576.1 million in October 2017 (see A/72/521), excluding contingencies and escalation.

287. The increase in the estimated cost for consultancy services was mainly a result of the decision to add the detailed design for the existing buildings B2 (offices and library), C, D, E and S to the scope of services to be delivered by the design firm. Previously, it had been envisaged that the work contractor would provide this detailed design.

288. The Board noted that, although the future contractor for the renovation work on the historic buildings would no longer be responsible for carrying out the detailed design for buildings B2, C, D, E and S, the estimated construction cost for those buildings had not decreased.

289. In the summer of 2017, management decided to utilize a consistent design-bid-build approach instead of the design and build approach. This new strategy was to bring the design of all renovation work required (including work on buildings B2, C, D, S and E) to the level of full technical design before the procurement of the construction work (see paras. 111–133 above for details). Therefore, the future contractor for the construction work on the historic buildings should no longer be responsible for carrying out any portion of the technical design. The Secretary-General stated that such a change of implementation strategy would not have an impact on the overall budget or schedule (see A/72/521, para. 60).

290. The Board noted that the estimated cost of consultancy services of CHF 121.1 million, as reported in October 2017 (A/72/521), did not include the cost of additional consultancy services related to the change of implementation strategy, which comprised mainly of the technical design for buildings B2, C, D, S and E.

291. The additional fee for the technical design, construction administration and post-completion of buildings B2, C, D and S was estimated at CHF 14.2 million, in a presentation to the Headquarters Committee on Contracts in mid-January 2018. The additional fee for technical design and construction administration for building E was estimated at CHF 18 million, in a response by management to the Board in March 2018.

292. Owing to the change of implementation strategy in the summer of 2017, the envisaged scope of work for the work contractor decreased with regard to design. Nevertheless, the estimated costs for the renovation work did not decrease.

293. In October 2017, the United Nations Office at Geneva signed two contracts with consultants. The first was for the performance of structural and architectural surveys. The second was for the performance of surveys in the mechanical, electrical, plumbing and building physics fields in the Palais des Nations. The contracts are on an on-call basis, allowing the strategic heritage plan team to conduct structural and asbestos surveys as and when required. The total not-to-exceed amount for these contracts is CHF 2.2 million.

294. The Board reviewed consultancy contracts, amendments to those contracts and Excel sheets from the strategic heritage team (contract management) and analysed the financial data. As a result, it identified obligations related to consultancy services of CHF 101 million contracted until 31 December 2017.

295. The estimated cost for consultancy services of CHF 121.1 million as presented in the fourth progress report is too low (see annex IV below). Even if only the obligations of CHF 101 million contracted until the end of 2017 and the additional costs related to the change of the implementation strategy of about CHF 14.2 million (buildings B2, C, D and S), plus about CHF 18 million (building E), are taken into account, the estimated amount will be exceeded significantly. In addition, the estimated amount will be exceeded once consultancy services that are not related to the change of the implementation strategy but that will nevertheless be contracted after 2017 (e.g. contract extensions) are taken into account.

296. Furthermore, the Board is of the opinion that the above-mentioned conclusion of contracts on structural, architectural, mechanical, electrical and plumbing surveys in October 2017 indicates that there are still significant uncertainties about the structure of the historic buildings. If the new surveys reveal, for example, additional asbestos or other hazardous material, the cost of both the design and the execution of the renovation work could increase significantly.

297. The Board recommends that the strategic heritage plan team strengthen its approach to cost forecasting by including a robustly calculated estimate of the forecast costs up to project completion, taking into account that there are still significant uncertainties about the structure of the historic buildings.

298. Management agreed with the overall recommendation that an up-to-date forecast should be prepared on a regular basis.

299. Management stated that, at the time of writing of the fourth progress report (A/72/521), the amount of the increase in the design fees was not yet known. As at March 2018, management's forecast for consultancy services, excluding escalation and contingency, was CHF 137.3 million.

300. In addition, management emphasized that the risk management firm had estimated that the new approach would result in a reduction of the risk that had been associated with the former design-and-build approach of CHF 9.9 million. Management announced that it would report in the next progress report the higher forecast for design fees and the lower risk in the probabilistic risk module.

301. The Board reiterates the importance of an accurate and up-to-date forecast of the project costs. It is crucial that the project owner and the Member States have a realistic idea of whether the project will reach completion within the allocated budget. It is necessary to take early and appropriate action if costs are escalating or increasing.

11. Potential alternative sources of project financing

Rental income

302. One of the objectives of the strategic heritage plan project is to relocate the staff of the Office of the United Nations High Commissioner for Human Rights (OHCHR) from rented premises in Geneva to the United Nations campus, in the new building H. Other income from United Nations entities in Geneva that are funded on an extrabudgetary basis may be generated by implementing flexible workplace strategies, which will enable management to bring many of these entities into the Palais des Nations and thus will generate significant additional rental income for the Office in future years. In addition to accommodating the offices of OHCHR, it would be possible to accommodate organizations such as the United Nations Children's Fund, the United Nations Development Programme and the United Nations Office for Project Services, which have expressed interest in relocating to the Palais des Nations.

303. According to paragraph 122 of the Secretary-General's fourth annual progress report on the strategic heritage plan (A/72/521), the income generated from the rental of premises at the United Nations campus, currently recognized as miscellaneous income, flows back to Member States. The applicable income from the rental of premises to United Nations organizations and related commercial entities for 2017–2024 and beyond was considered, with an annual amount of $1.2 million as from 2017.

304. Furthermore, table 8 of the fourth annual progress report shows an annual amount of $2.2 million as potential rental income from OHCHR, as future tenant, starting as from 2024. The Board identified an applicable rental income of $3.4 million for the biennium 2016–2017, or $1.7 million per financial year. Furthermore, management has already agreed on raising the amount charged for future leases (e.g. for the International School of Geneva, an increase of 33 per cent starting in 2018) and additional contracts with new tenants.

305. Management stated that the $1.2 million quoted in the report was the net rental income that had been returned to Member States as miscellaneous income. The amount of $3.4 million pertained to the gross income earned by the United Nations Office at Geneva in 2016 and 2017 ($1.7 million each financial year). From that

amount, 30 per cent was used to cover the related operating costs of the Office. In the view of the Board, that was not shown in the report in a comprehensible manner.

306. Upon completion of the strategic heritage plan project, it is envisaged that OHCHR staff will move to the new building of the Palais des Nations. According to paragraph 43 of the 2013 report of the Advisory Committee on Administrative and Budgetary Questions on the strategic heritage plan (A/68/585), the United Nations Office at Geneva will in return generate rental income related to the 47 per cent of staff that are funded from extrabudgetary resources, which is equivalent to approximately 47 per cent of the value of the leases being paid at present to house OHCHR. Those figures are based on a total of 605 posts based in Geneva, of which 286 posts (47 per cent) were funded from extrabudgetary resources. The Board notes that this differentiation and the number of staff at Geneva are based on data from 2012 and 2013.

307. According to *OHCHR Report 2016*, 623 staff are located in Geneva, in the Palais Wilson and in the Motta building. In addition to those staff members, a varying number of non-permanent staff will be added (e.g. United Nations volunteers, consultants and individual contractors).

308. Palais Wilson is rented from the Fondation des immeubles pour les organisations internationales. The Motta building is rented from a private company. The lease contract for the Palais Wilson could have been terminated by management by 31 December 2017 with a six-month advance notification. This possibility remained unused, so the contract has been extended automatically for another five years, until 31 December 2022. The lease contract for the Motta building would have expired on 31 July 2017. Therefore, the rental period was extended by the United Nations Office at Geneva in August 2016 for an additional five years, with the possibility of two one-year extensions. The contract can be terminated on 31 July 2022 at the earliest. An amendment to the contract was signed by the Office on 5 August 2016 (contract 53/2010 ESI, amendment no. 6).

309. The $2.2 million estimated as potential rental income from OHCHR in the most recent annual progress report of the Secretary-General on the strategic heritage plan is based on the assumption that nearly half of the OHCHR rental cost could be charged by the United Nations Office at Geneva as rental income because 47 per cent of OHCHR staff positions are funded from extrabudgetary sources. The Board notes that the funding key for staff located in Geneva of 53 per cent regular budget vs. 47 per cent from extrabudgetary resources was determined based on OHCHR data for the financial year 2012 and has not been updated. Since extrabudgetary funding of OHCHR has increased in recent years — in 2016, about 45 per cent of total funding for OHCHR was covered by the regular budget and 55 per cent was funded from extrabudgetary resources (see *OHCHR Report 2016*) — the estimated rental income from OHCHR starting in 2024 might be higher than the $2.2 million per annum stated in the current progress report on the strategic heritage plan.

310. Pursuant to table 2 of the 2013 report of the Advisory Committee on Administrative and Budgetary Questions on the strategic heritage plan (A/68/585), management initially estimated the annual cost for rent, maintenance and the provision of safety and security at the leased facilities for OHCHR (Palais Wilson and Motta building) as approximately $9.857 million per year. Of this amount, $1.945 million per year has been paid for safety and security services for the two leased premises.

311. The Board noted that management had not calculated expected future costs and potential savings related to maintenance and safety and security as a result of OHCHR being a tenant of building H. Given that additional organizations that were funded from extrabudgetary resources would move to the Palais des Nations, management

needed to consider the costs of maintenance and safety and security in proportion to the organizations.

312. Management, together with OHCHR, should review opportunities to relocate the OHCHR units located in the Palais Wilson as soon as the new building is ready for occupancy.

313. Furthermore, management should indicate in a transparent way how the operating costs of 30 per cent are calculated.

314. Management stated that it had recently launched a working group on future rental rates, whose responsibilities would include consideration of the flexible workplace strategy proposals being made in the context of the strategic heritage plan. That would have an impact on the billing methodology and the appropriate amount that would be charged to OHCHR.

315. With regard to option of an earlier relocation of OHCHR, or parts of OHCHR, management pointed out that there was no possibility to avoid the rental cost by moving OHCHR earlier than 1 January 2023 or 1 August 2022 because of the rental agreements concluded for the Palais Wilson and the Motta building. Furthermore, management referred to the needed swing space capacity during the renovation phase without quantifying the detailed needs.

316. **The Board recommends that management update and calculate the applicable and potential rental income of premises based on current contracts, data and realistic assumptions, taking into account the number of relocating staff, appropriate rental cost (using the arm's length principle) and an updated funding key for OHCHR.**

317. **In addition, the Board recommends that the updated rental income and costs be reported to the General Assembly in a clear and transparent way.**

318. **Furthermore, the Board recommends that management charge the cost for maintenance and for safety and security for the new building proportionally to all potential users in accordance with their individual needs.**

319. Management concurred with the recommendations. Management pointed out that it would continue to report rental income in the context of the strategic heritage plan, aligned with the amounts estimated and reported in the context of the budget under income section 2.

320. Regarding Safety and Security, management indicated that a study which was currently under way would be used to assess the additional security requirements resulting from the new building and additional staff on the premises. Nevertheless, the exact requirements and how they would be proportionately applied to future tenants was still to be determined. Regarding standard maintenance costs such as utilities and cleaning, management stated that it was envisaged that those charges would be part of the lease agreements.

Valorization of United Nations-owned land

321. In its resolution 69/262, the General Assembly requested the Secretary-General "to continue to explore all possible alternative funding mechanisms in order to reduce the overall assessment on Member States and to report on concrete steps taken in this regard".

322. The Secretary-General referred to one such funding mechanism in paragraph 98 of his 2014 report on the strategic heritage plan (A/69/417 and A/69/417/Corr.1): the sale or lease of certain parcels of land owned by the United Nations in Geneva.

323. In the third progress annual report on the strategic heritage plan, the Secretary-General reported in detail on the valorization potential of the parcels of United Nations-owned land at Geneva (see A/71/403 and A/71/403/Corr.1, paras. 93–119). A comprehensive independent valorization study was undertaken by a real estate company. A total valorization potential for 105,798 m^2 of United Nations land was identified. The identified parcels include:

(a) Parcel 434: Club international de tennis and Fondation de l'École internationale de Genève (17,698 m^2);

(b) Parcel 435: Villa La Fenêtre and its annexes (68,660 m^2);

(c) Parcel 2009: United Nations training centre and protected barns (55,598 m^2);

(d) Parcels 2005, 2079 and 2080: Villa and Parc des Feuillantines (17,421 m^2).

324. Parcels identified as having no realistic valorization potential included Parcel 2100 (United Nations port) (4,428 m^2 identified). The third progress report stated that the "parcel is located in the 'green zone', which is preserved for recreation use only" and that construction was prohibited.

325. In the fourth progress report on the strategic heritage plan (A/72/521), only the parcels that were considered as having valorization potential were mentioned. Therefore, there were no further considerations on parcel 2100 (United Nations port).

326. In 2013, management had already required a consultant to draw up an inventory of the real estate property of the United Nations in Geneva and to evaluate and estimate the market value of United Nations-owned parcels. The consultant identified an estimated market value of between CHF 2.40 million and CHF 2.60 million for the United Nations port parcel. In a comprehensive analysis of the valorization potential of United Nations land plots in Geneva performed by another consultant in 2016, the value of United Nations port was estimated to be CHF 2.40 million. Nevertheless, the estimated value was not taken into account in the reports to the General Assembly.

327. In the view of the Board, the United Nations port parcel has a high market value. Moreover, the Board assumes that its market value might have been increased since the most recent estimation in 2013 or 2014 because of general market developments. Furthermore, the Board cannot see any reason why management stated a limited commercial potential for this parcel even though the value of the parcel had been estimated to be CHF 2.4 or CHF 2.6 million by two independent consultants. Furthermore, the Board found no evidence of the related earnings and cost. The current earnings and cost also have an influence on the valuation of this parcel, and should be properly recorded.

328. Management stated that there was no further development potential for parcel 2100 owing to its location in a green zone on which construction was prohibited unless it served the public interest. Therefore, the plot realistically could be sold only to a public authority for leisure use.

329. Moreover, management pointed out that it could take up to 10 years to open the site for residential or commercial development. In that case, the value could increase by up to CHF 5.8 million. The estimated 10-year period was beyond the horizon of the strategic heritage plan project. Therefore, management had focused on other plots identified as having more realistic valorization potential.

330. One of the parcels owned by the United Nations Office at Geneva with realistic valorization potential is parcel 434, with an area of approximately 17,698 m^2. The largest part of it, with approximately 13,908 m^2, is currently leased to the Club international de tennis, and an area of 3,790 m^2 is leased to the Fondation de l'École internationale de Genève.

331. In the supplementary financial information for the Advisory Committee on Administrative and Budgetary Questions from 2017, it is stated that an independent real estate consultant estimated a potential income of CHF 40 million to CHF 50 million from long-term leases of the parcel used by the Club international de tennis; for the area used by the Fondation de l'École internationale de Genève, a potential income of up to CHF 5 million was estimated.

(a) The original lease contract with the Club international de tennis (from 2005), with an annual rent of CHF 6,335, expired at the end of 2015 (amendment dated 8 May 2012). An extension with an annual rent of CHF 15,000 was agreed informally at the end of 2015. On 22 December 2017, management and the Club international de tennis agreed on a second lease amendment regarding the use of the parcel by the Club until 31 December 2020, with an opportunity for earlier termination (six months earlier). For the contracted period (2018–2020), the Club international de tennis shall pay CHF 15,000 per annum;

(b) The neighbouring parcel 435, with a total area of 86,623 m^2, is divided into three areas. Area 1, with 7,782 m^2, is currently used by the Fondation de l'École internationale de Genève. Together with the 3,790 m^2 of parcel 434, management leased a total area of 11,572 m^2 to the Fondation. In 2015, management concluded a new rental agreement with the Fondation that increased the rent from CHF 5,000 (CHF0.43 per m^2) to CHF 75,000 for 2016 and 2017, with the possibility of two one-year extensions at the annual rate of CHF 100,000 (CHF8.64 per m^2). Area 2, with 7,315 m^2, and area 3, with 45,585 m^2, are leased to non-Secretariat United Nations entities (Villa La Fenêtre and parkland) on a short-term basis.

332. Parcel 434 and areas 1 and 2 of parcel 435, which in total represent 32,795 m^2, are located in a zone for high density residential development by international organizations and have a very high valorization potential.

333. In a report on the estimation of the value of United Nations-owned land from June 2014, a contracted consultant (Colliers International) had recommended a realistic annual rent of up to CHF 252,000 (based on a total value of CHF 6.3 million) for the land used by the Fondation de l'École internationale de Genève (7,782 m^2). For the land used by the Club international de tennis, the consultant estimated a realistic annual rent of up to CHF 528,000 (based on a total value of CHF 13.2 million).

334. The Board noted that the current lease agreements with the Club international de tennis and the Fondation de l'École internationale de Genève might not be based on realistic valuations and assumptions and that therefore the rental income might be too low.

335. Management highlighted that the valorization work for parcels 434 and 435 were the elements that would boost the potential value of those plots considerably to the levels indicated. That work included realigning legal boundaries, reregistering them and then making a case for rezoning the use of the revised legal plots. It was the most promising path for realizing the greatest valorization income for those plots, which was estimated to take up to two or three years. In the meantime, management continued to grant short-term lease extensions so as to receive at least some income during that time.

336. Management further stated that all lease contracts concluded by the United Nations Office at Geneva contained the right to terminate the agreements with reasonable cause.

337. A contracted consultant identified a theoretical land value of between CHF 1,000 and CHF 1,807 per m^2 for parcels 434 and 435 according to its management summary as at June 2016. Furthermore, the consultant estimated that the

valorization potential regarding the areas used by the Club international de tennis and the Fondation de l'École internationale de Genève could already be realized in 2017 (up to CHF 72.747 million).

338. Management stated that the figures quoted from the consultant were related to the outright sales value based upon the immediate sale at market value of both of the plots by 2017. This was deemed neither in the best interest of the organization nor realistic.

339. Moreover, management highlighted that the use of that land had been further restricted by the General Assembly to "long-term community-oriented leasing arrangements" (see resolution 71/272 A, sect. XVIII, para. 23).

340. The Board noted that, although management already knew in 2014 about the valorization potential and the realistic local lease conditions, it did not develop a timely strategy to achieve a higher rental income or sale at market value.

341. Regarding parcel 2009, the United Nations training centre, the Board noted that there had been no planning regarding the potential use by the United Nations. Management should verify the options for renovation or demolition of the buildings and for a possible replacement, taking into account further training needs.

342. Regarding parcel 435 (Villa La Fenêtre), the Board noted that there was no planning regarding the required renovation and the upcoming cost. This would have a direct impact on future lease or renting opportunities.

343. The Board noted that the strategic approach for valorizing United Nations-owned land in Geneva which was not fully utilized by the United Nations as best as possible and in a defined period of time needed to be improved. The Board also noted that a team that was experienced in valorization was lacking. In that context, the Board did not understand why a team experienced in legal and real estate affairs had not been set up right from the beginning of the project.

344. **The Board recommends that management develop a detailed valorization strategy for all parcels with valorization potential.**

345. **The Board recommends that management consider establishing an experienced internal team responsible for the valorization of United Nations-owned land in Geneva.**

346. **The Board recommends that management verify the legal assessments and the earnings and cost regarding parcel 2100 (United Nations port), estimate a realistic value of the parcel and report the reviewed valuation, the proposals for the future use of the United Nations port and the possible income to the General Assembly.**

347. **In addition, the Board recommends that management record the costs and earnings regarding valorization and report these to the General Assembly.**

348. **Finally, the Board recommends that management plan the upcoming valorization steps with a realistic timeline, scheduled cost and expected income.**

349. Management concurred with the recommendations. Management highlighted that the lack of dedicated resources in that regard would limit progress on the initiative. Since the General Assembly, in its resolution 71/272 A, had not approved the provision of the requested additional resources and given the lack of internal capacity to carry out such a function, management had launched the recruitment of external consultancy services.

350. Management stated that, given that the General Assembly, in its resolution 72/262 A, had decided that all income from the rental or valorization of land owned

by the Organization in Geneva would be reflected under income section 2, General income, of the proposed programme budget for the biennium 2018–2019, none of the proceeds of valorization would reduce assessments on Member State for the strategic heritage plan project costs.

D. Acknowledgements

351. The Board wishes to express its appreciation for the cooperation and assistance extended to its staff by the Director-General of the United Nations Office at Geneva and by members of his office.

(*Signed*) Rajiv **Mehrishi**
Comptroller and Auditor General of India
Chair of the Board of Auditors

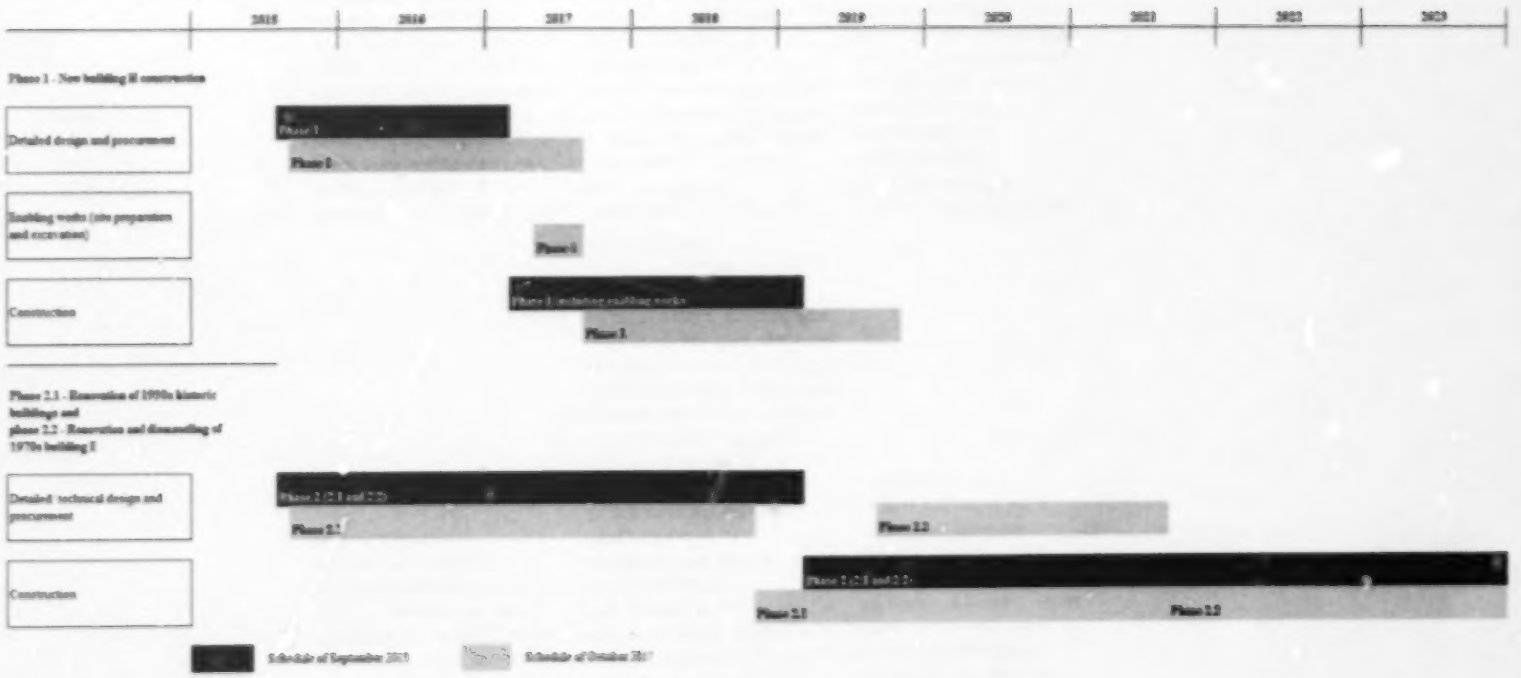
(*Signed*) Kay **Scheller**
President of the German Federal Court of Auditors
(Lead Auditor)

(*Signed*) Mussa Juma **Assad**
Controller and Auditor General of the
United Republic of Tanzania

24 July 2018

Annex I

Project schedules of October 2017 and of September 2015


2015
2016
2017
2018
2019
2020
2021
2022
2023
Phase 1 - New building H construction
Detailed design and procurement
Enabling works (site preparation and excavation)
Construction
Phase 2.1 - Renovation of 1930s historic buildings and
phase 2.2 - Renovation and dismantling of 1970s building I
Detailed technical design and procurement
Construction
Schedule of September 2015
Schedule of October 2017
Phase 1 - New building H construction
Enabling works (site preparation and excavation)
Construction
Phase 2.1 - Renovation of 1930's historic buildings
Renovation building A (conference)
Renovation building B
Renovation building C (offices and conference)
Renovation building D (offices)
Renovation building S (offices)
Phase 2.2 - Renovation and dismantling of 1970s building I
Renovation building I (conference) and dismantling of building I (office tower)

Source: Board analysis of the second and fourth progress reports of the Secretary-General on the strategic heritage plan (A/70/394 and A/70/394/Corr.1 and A/72/521, respectively).

Note: The schedule for the strategic heritage plan project contained in the second annual progress report of the Secretary-General was approved by General Assembly in its resolution 70/248 A.

Annex II

Status of implementation of previous recommendations

	Report of the Board of Auditors	Paragraph reference	Recommendations of the Board	Management comments on the audit report (A/72/5 (Vol. I) and A/72/5 (Vol. I)/Corr.1, chap. II)	Implementation status	Status after verification: Under implementation	Status after verification: Overtaken by events	Status after verification: Not implemented
1.	2016 A/72/5 (Vol. I) and A/72/5 (Vol. I)/Corr.1, chap. II	379	The Board recommends that the Administration adjust the governance structure to preclude any risk of conflicts of interest. In particular, the role of the Director of Administration as senior user must be segregated from the duties of project executive and from the duties of the strategic heritage plan project director.	Management considers this recommendation implemented. The strategic heritage plan project manual has been revised to show that the Director of Administration fulfils the role of project executive and that the role of senior user is now being jointly undertaken by the Director of the Division of Conference Management and the Chief of Central Support Services at the United Nations Office at Geneva, thus segregating the duties. Management considers this recommendation closed (subject to the final approval of the strategic heritage plan project manual by the project executive and the project owner)	The recommendation is considered to be implemented. The Director of Administration no longer acts as project director. The project executive serves as the interface between the project owner and the project director. The role of senior user is segregated from the project executive *in persona*.	X		
2.	2016 A/72/5 (Vol. I) and A/72/5 (Vol. I)/Corr.1, chap. II	383	The Board recommends that the project owner put in place both independent and integrated risk management, as separate functions, and revise and specify the liaison of the two different risk management functions in the strategic heritage plan programme manual.	Management considers this recommendation implemented. The risk management firm's contract has been amended to reflect the two distinct roles, which are being carried out by different people. The strategic heritage plan project manual has been revised accordingly.	The recommendation has been implemented. Integrated and independent risk management are segregated by amendment no. 7 to the contract with the risk management firm. The separate functions of risk management are also described in the programme manual.	X		

No.	Audit report year	Paragraph reference	Recommendations of the Board	Management comments on the audit report (A/72/5 (Vol. I) and A/72/5 (Vol. I)/Corr.1, April 2018	Board's assessment	Status after verification			
						Implemented	Under implementation	Overtaken by events	Not implemented
3.	2016 A/72/5 (Vol. I) and A/72/5 (Vol. I)/Corr.1, chap. II	387	The Board recommends that the project owner seek a framework for staff continuity within the strategic heritage plan project.	Management extends the contracts of the strategic heritage plan staff, when they are due for renewal, to the maximum extent allowed within the existing overall staffing rules and regulations. This practice is consistent with that of the rest of Division of Administration of the United Nations Office at Geneva.	The Board acknowledges the extensions of the contracts. Nevertheless, the strategic heritage plan monthly report of December 2017 states that 6 out of 12 staff contracts will end in 2018. Four out of these six staff are in crucial positions, e.g. Chief of Design and Construction. The leading project manager architect/space planner resigned from the project in early 2018. Staff turnover may impair the continuity and success of the project. The Board holds that staff continuity is of high significance. A lack of staff continuity cannot be completely counterbalanced by continuity in consultants and contractors. Therefore, the Board recommends seeking a framework for staff continuity not only within the strategic heritage plan project but also within other major construction projects.		X		

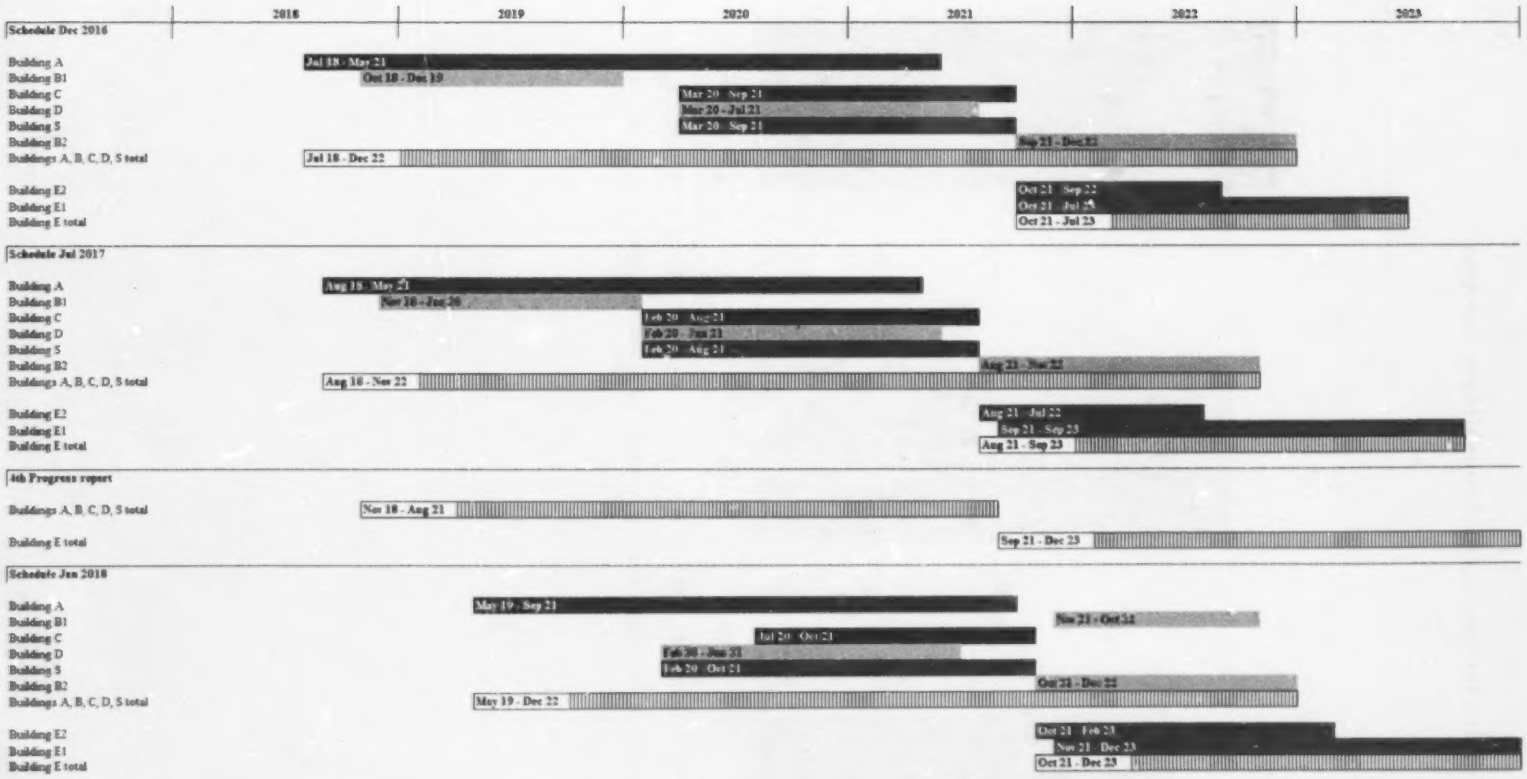
No.	Audit report year	Paragraph reference	Recommendations of the Board	Management comments on the audit report (A/72/5 (Vol. I) and A/72/5 (Vol. I)/Corr.1, April 2018	Board's assessment	Status after verification: Implemented	Under implementation	Overtaken by events	Not implemented
4.	2016 A/72/5 (Vol. I) and A/72/5 (Vol. I)/Corr.1, chap. II	391	The Board recommends that: (a) the strategic heritage plan team finalize the parts of the programme manual related to the construction phase; and (b) the project owner approve and implement the programme manual.	With regard to recommendation (a), the strategic heritage plan project manual has been finalized and has been operationalized and is being implemented by the strategic heritage plan team. Regarding recommendation (b), the final approval of the strategic heritage plan project manual by the project executive and the project owner is pending.	The strategic heritage plan team last revised the programme manual in October 2017, including with regard to updated formalities related to the construction phase. The strategic heritage plan project team acts in line with the manual; however, the manual has not yet been approved.		X		
5.	2016 A/72/5 (Vol. I) and A/72/5 (Vol. I)/Corr.1, chap. II	397	The Board recommends that, with regard to future strategic heritage plan solicitations, the United Nations Office at Geneva review as to whether impacts of acceptance and non-acceptance of substantial contract clauses are appropriately reflected in the evaluation methodology and criteria. For this reason, the Office may consider: (a) Explicitly widening the scope of the risk mitigation evaluation with regard to potential impacts of non-acceptance of the draft contract; or (b) Identifying such crucial contract clauses that are of particular importance for the United Nations and incorporating them into the list of pass/fail criteria; or	Management considers this recommendation implemented for the new building tender process. Based on the lessons learned from the new building tender, a revised process is currently being prepared for the forthcoming request for proposals process related to the renovation contract.	The Board acknowledges that a full review of contract clauses and evaluation criteria will be held. The Board will monitor the outcome of this process.		X		

No.	Audit report year	Paragraph reference	Recommendations of the Board	Management comments on the audit report (A/72/5 (Vol. I) and A/72/5 (Vol. I)/Corr.1, April 2018	Board's assessment	Status after verification			
						Implemented	Under implementation	Overtaken by events	Not implemented
			(c) Defining acceptance of the entire draft contract as a pass/fail criterion (possibly combined with a mitigation of contract clauses whose acceptance by bidders seems to be rather unlikely).						
6.	2016 A/72/5 (Vol. I) and A/72/5 (Vol. I)/Corr.1, chap. II	402	The Board recommends that, involving local lawyers and considering all potential negative impacts, the Office review as to whether amendments/clarifications on the warranty regime as set forth in the contract (including the conditions and the specifications) are deemed necessary and feasible. If so, the Office may wish to consider developing a clear and comprehensive warranty regime in a designated paragraph of the contract conditions or in a separate document.	Management considers this recommendation implemented. Based on the lessons learned from the new building tender, a specific, clear and unambiguous warranty section will also be prepared for the request for proposals process related to the first renovation contract and will be included as part of the tendering documents and contract.	The Office reviewed the warranty regime as set forth in the initial draft contract and developed a comprehensive warranty regime in a designated paragraph of the revised contract.	X			
7.	2016 A/72/5 (Vol. I) and A/72/5 (Vol. I)/Corr.1, chap. II	403	The Board furthermore recommends that the Office review as to whether amendments or clarifications are deemed necessary on whether and to what extent further stipulations of SIA 118 and SIA 118/380 (on payment, claims etc.) are to apply.	Management considers this recommendation as implemented.	The recommendation is considered to be implemented. The Office reviewed the draft contract for the new permanent building (see recommendation no. 6). The draft contract clearly stipulates which contract documents are to have priority in the event of discrepancies.	X			

No.	Audit report year	Paragraph reference	Recommendations of the Board	Management comments on the audit report (A/72/5 (Vol. I) and A/72/5 (Vol. I) Corr.1, April 2018	Board's assessment	Status after verification: Implemented	Under implementation	Overtaken by events	Not implemented
8.	2016 A/72/5 (Vol. I) and A/72/5 (Vol. I)/Corr.1, chap. II	404	Concerning future contract drafting, the Board recommends that the Office ensure that general contract terms and specifications are aligned more closely.	The United Nations Office at Geneva has implemented this in all subsequent contracts and has begun the process of aligning the contract terms and specifications related to the forthcoming renovation contract, together with the relevant parties, including the Office of Legal Affairs and the local law firm.	The Board acknowledges that the contract terms and specifications are being aligned. The Board intends to monitor the outcome of this process.		X		
9.	2016 A/72/5 (Vol. I) and A/72/5 (Vol. I)/Corr.1, chap. II	411	The Board considers the schedule for the enabling work package and the construction work for the new permanent building as very ambitious and recommends that the Administration take effective actions during the procurement process for the new permanent building, because any further delay will jeopardize meeting the envisaged start date of the construction. Nonetheless, accuracy and rigorous leadership of actions must be ensured because weaknesses in that regard may cause further delays.	As this recommendation related to the procurement process for the new building, management considers it implemented. The new permanent building contract was signed two days ahead of schedule on 4 September 2017. This was achieved through successful risk mitigation actions, which included recovering three weeks of delays in the tender process. Construction work on the new building is proceeding, although delays were incurred, with the contractor failing to start the work on time. Unexpected ground conditions have also meant that extra work has been required, for which an extension of time has been agreed and the completion date has been revised to 13 January 2020.	The recommendation is considered to be implemented. At the request of bidders, the Office postponed the bid submission deadline by three weeks. Nevertheless, the Office managed to enter into the contract in line with the revised schedule by accelerating the evaluation phase.	X			
Total			**9**			**5**	**4**	**0**	**0**
Percentage			**100**			**56**	**44**	**0**	**0**

Annex III

Comparison of schedules for work at the historic buildings and building E



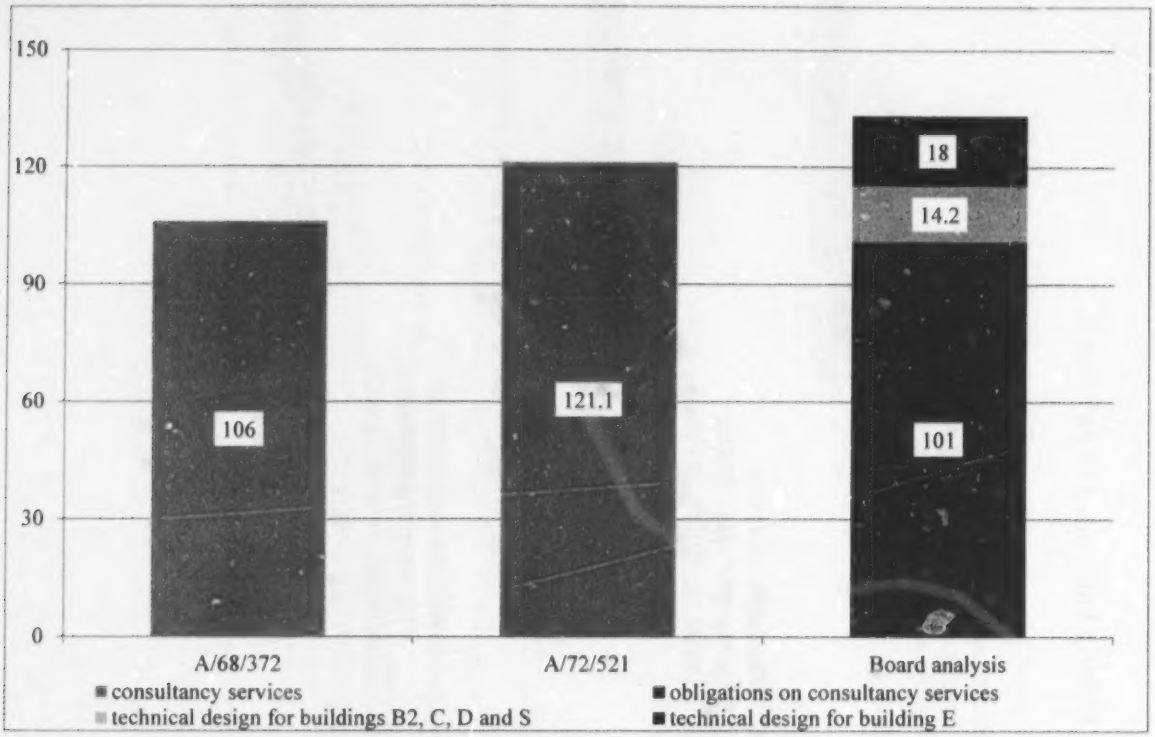
Source: Board analysis of the strategic heritage plan project team's project schedules and the Secretary-General's fourth annual progress report on the strategic heritage plan (A/72/521).

Note: Planned renovation and dismantling work without design and procurement.

Annex IV

Cost estimates for contractual consultancy services

(Millions of Swiss francs)



Source: Board analysis of management data; annual progress reports of the Secretary-General A/68/372 and A/72/521.

United Nations A/73/158

General Assembly

Distr.: General
13 July 2018

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Seventy-third session
Item 74 (b) of the preliminary list*
Promotion and protection of human rights: human rights questions, including alternative approaches for improving the effective enjoyment of human rights and fundamental freedoms

Promotion of a democratic and equitable international order

Note by the Secretariat

1. In its resolution 18/6, the Human Rights Council established the mandate of the Independent Expert on the promotion of a democratic and equitable international order and requested the Independent Expert to report annually to the Council and the General Assembly. The mandate of the Independent Expert, and the Council's request for annual reporting to both bodies, was most recently renewed by Council resolution 36/4.

2. The Human Rights Council, at its thirty-seventh session, appointed Livingstone Sewanyana as the second holder of the mandate of Independent Expert. He formally took up his role on 1 May 2018.

3. In his first report to the Human Rights Council (A/HRC/39/47), drafted in the brief period after he assumed his function, the Independent Expert sets out preliminary views and presents his approach to the mandate. In addition to proposing priority issues to be covered during his tenure, the Independent Expert seeks input on highlighted topics, identifies stakeholders with whom he plans to cooperate and outlines his intended methods of work.

4. Given the brief period since his appointment and the timing of the reporting cycle, the Independent Expert intends for his report to the Human Rights Council to also be a submission to the General Assembly. The Secretariat therefore has the honour to refer the Assembly to that report.

* A/73/50.